

# PRELIMINARY REPORT OF 060902

last update on Sat Sep 2 16:39:18 GMT 2006

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## 1 - Introduction

This report is based on the analysis of wave mode level-1 cross spectra (ASA\_WVS\_1P), global monitoring products (ASA\_GM1\_1P), which are the available few hours after the acquisition, on the browse (BP) products and on the Module Stepping (MS) product.

## 2 - Summary

### 2.1 - Instrument Unavailability

No unavailabilities during the reported period.

### 2.2 - Auxiliary files

Summary of the auxiliary files used from 2006-09-01 00:00:00 to 2006-09-02 16:39:18

PDHS-K					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM

ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	43	83	18	4	0
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	43	83	18	4	0
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	43	83	18	4	0
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	43	83	18	4	0

PDHS-E					
AUXILIARY FILE	WVS	GM1	IMM	APM	WSM
ASA_CON_AXVIEC20051013_151540_20050916_195733_20061231_000000	24	57	47	15	48
ASA_XCA_AXVIEC20060717_154125_20050916_195733_20061231_000000	24	57	47	15	48
ASA_INS_AXVIEC20051219_161945_20030211_000000_20061231_000000	24	57	47	15	48
ASA_XCH_AXVIEC20051219_162547_20020301_000000_20081231_000000	24	57	47	15	48

## 2.3 - Browse Visual Inspection

## 2.4 - Data Analysis

- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.

## 3 - Module Stepping Mode

No anomalies observed on available MS products:

Polarisation	Start Time
V	20060831 100807
H	20060901 143818

### MSM in V/V polarisation

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

**MSM in H/H polarisation**

Pre-launch Reference	DDS-B (2003-06-12) reference
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

**4 - Internal calibration Results**

No anomalies observed.

**4.1 - Daily statistics**

**4.1.1 - Evolution for WVS**

Evolution of cal pulses for WVS
<input type="checkbox"/>
<input type="checkbox"/>

**4.1.2 - Evolution for GM1**

Evolution of cal pulses for GM1
<input type="checkbox"/>
<input type="checkbox"/>

**4.2 - Cyclic statistics**

**4.2.1 - Evolution for WVS**

Evolution of cal pulses for WVS
<input type="checkbox"/>

**P1a Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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**P1 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.942346	0.009858	0.006640
7	P1	-3.076301	0.051592	0.108593
11	P1	-4.082569	0.064614	0.087888
15	P1	-6.200777	0.094917	0.057215
19	P1	-3.471190	0.009198	-0.078235
22	P1	-4.563149	0.024682	0.010850
26	P1	-3.929631	0.018932	-0.030594
30	P1	-5.761284	0.025300	0.008094
3	P1	-16.552227	0.263460	-0.072215
7	P1	-16.848677	0.642669	0.429695
11	P1	-16.831430	0.307589	0.153620
15	P1	-12.959741	0.149484	0.096345
19	P1	-14.527771	0.052329	-0.094392
22	P1	-15.826701	0.554352	0.356222
26	P1	-15.174146	0.205202	-0.133924
30	P1	-17.005457	0.318523	0.149068

**P2 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-20.862738	0.084813	0.106366
7	P2	-21.858892	0.099565	-0.000397
11	P2	-15.749937	0.113040	0.041096
15	P2	-7.099562	0.098382	0.034731
19	P2	-9.114234	0.091943	0.014018
22	P2	-18.133369	0.086275	0.048254
26	P2	-16.397272	0.093250	0.000546
30	P2	-19.477364	0.091208	0.038797

**P3 Cyclic statistics**

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.172990	0.003819	-0.004820
7	P3	-8.172990	0.003819	-0.004820
11	P3	-8.172990	0.003819	-0.004820
15	P3	-8.172990	0.003819	-0.004820
19	P3	-8.172990	0.003819	-0.004820
22	P3	-8.172990	0.003819	-0.004820
26	P3	-8.173039	0.003818	-0.004783
30	P3	-8.173039	0.003818	-0.004783

#### 4.2.2 - Evolution for GM1

Evolution of cal pulses for GM1



#### P1a Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
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#### P1 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P1	-3.833675	0.021319	-0.020779
7	P1	-2.496523	0.281906	0.234942
11	P1	-2.898482	0.141174	0.064339
15	P1	-3.657276	0.145606	0.018215
19	P1	-3.430493	0.013274	-0.021709
22	P1	-5.082794	0.034263	-0.005250
26	P1	-5.871161	0.024701	-0.015560
30	P1	-5.185487	0.037826	0.027728
3	P1	-11.629499	0.066910	-0.012579
7	P1	-9.918614	0.187632	0.095374
11	P1	-10.304012	0.084347	-0.077619
15	P1	-10.825910	0.176738	-0.138422
19	P1	-15.533197	0.087567	-0.010742
22	P1	-20.867090	1.740425	0.306500
26	P1	-16.074839	0.411227	0.336615
30	P1	-17.984016	0.720556	-0.021729

### P2 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P2	-16.457905	0.081924	0.116688
7	P2	-22.245945	0.196202	0.138809
11	P2	-10.936844	0.056047	0.128777
15	P2	-4.876090	0.042033	0.039032
19	P2	-6.853893	0.040559	0.022253
22	P2	-8.176677	0.062075	0.044981
26	P2	-24.166960	0.126965	0.014937
30	P2	-21.966337	0.077770	0.025661

### P3 Cyclic statistics

row	pulse	mean (dB)	stdev (dB)	slope(dB/cycle)
3	P3	-8.014774	0.003713	-0.012146
7	P3	-8.014672	0.003723	-0.012078
11	P3	-8.014709	0.003726	-0.011416
15	P3	-8.014711	0.003726	-0.011492
19	P3	-8.014802	0.003741	-0.012107
22	P3	-8.014880	0.003712	-0.011763
26	P3	-8.014741	0.003716	-0.012173
30	P3	-8.014694	0.003721	-0.011704

## 4.3 - cal pulses monitoring (all rows)

### 4.3.1 - Evolution for WVS



### 4.3.2 - Evolution for GM1



## 5 - RAW data statistics

No anomalies observed.

### 5.1 - Input mean I/Q

channel	stat	DSS-B
MEAN I	mean	0.000554287
	stdev	1.76052e-07
MEAN Q	mean	0.000532685
	stdev	2.15014e-07



### 5.2 - Input stdev I/Q

channel	stat	DSS-B
STDEV I	mean	0.136554
	stdev	0.00107821
STDEV Q	mean	0.136901
	stdev	0.00109471



### 5.3 - Gain imbalance I/Q



## 6 - Telemetry analysis

Summary of analysis for the last 3 days 2006090[112]

The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20060901_084711_000006702050_00451_23551_3941.N1	0	21
ASA_WSM_1PNPDE20060901_183643_000002072050_00457_23557_0466.N1	0	67
ASA_WSM_1PNPDE20060902_020157_000000862050_00461_23561_0501.N1	0	34







## 7 - Doppler Analysis

Preliminary report. The data is not yet controlled



### 7.1 - Unbiased Doppler Error for WVS

#### Evolution of unbiased Doppler error (Real - Expected)


Ascending

Descending

### 7.2 - Absolute Doppler for WVS

#### Evolution of Absolute Doppler


Ascending

Descending



### 7.3 - Doppler evolution versus ANX for WVS

#### Evolution Doppler error versus ANX


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### 7.4 - Unbiased Doppler Error for GM1

#### Evolution of unbiased Doppler error (Real - Expected)


Ascending




Descending

### 7.5 - Absolute Doppler for GM1

Evolution of Absolute Doppler

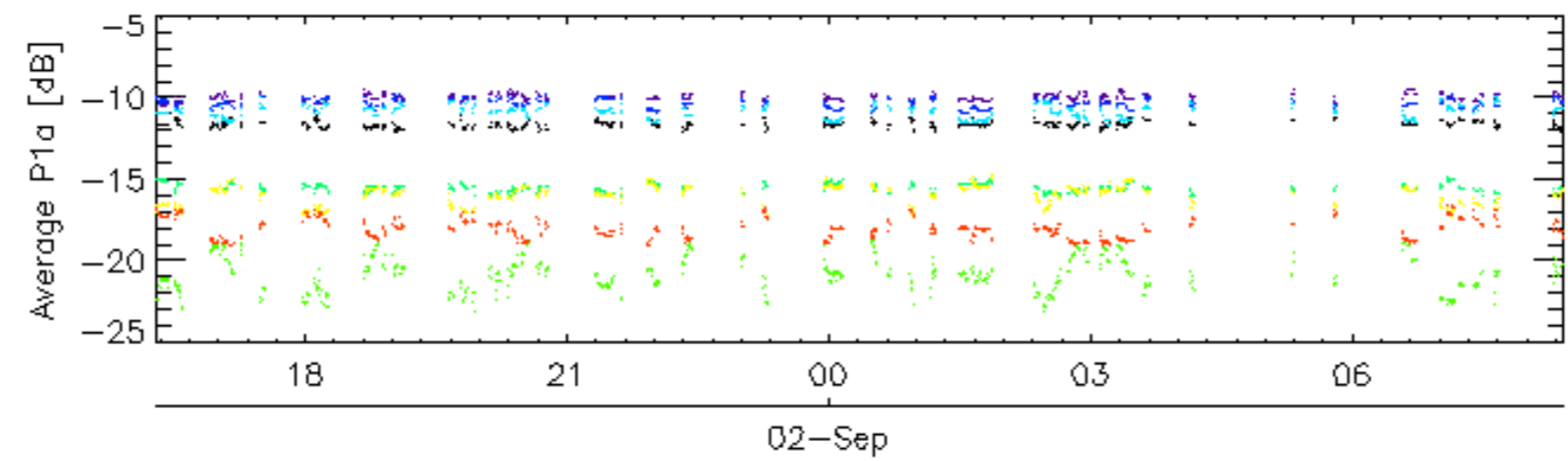
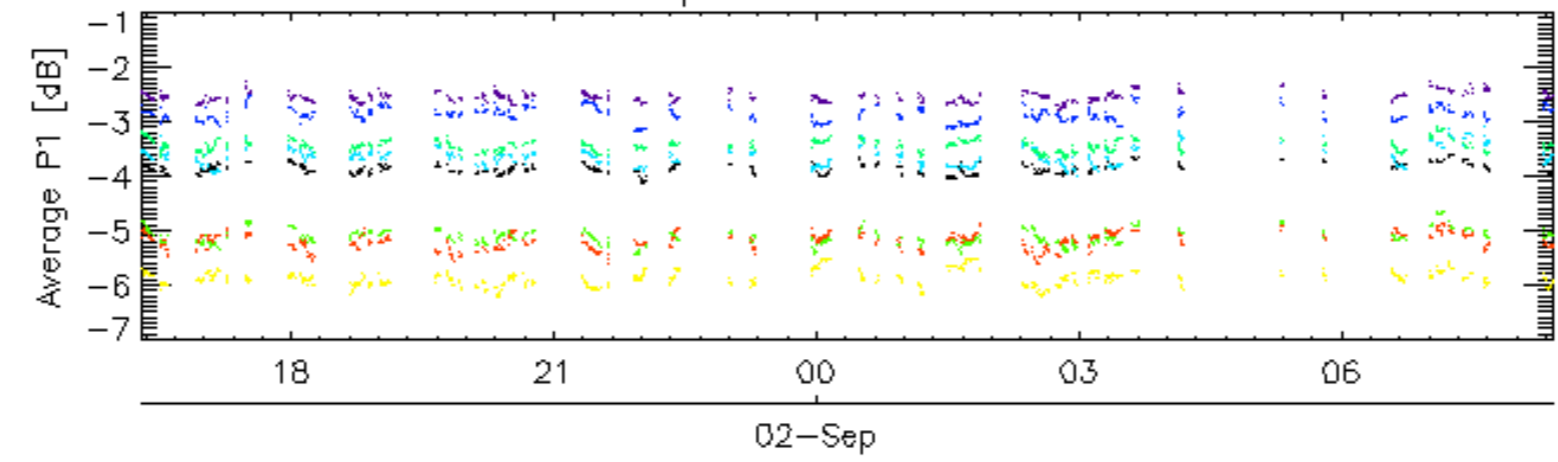
Ascending

Descending

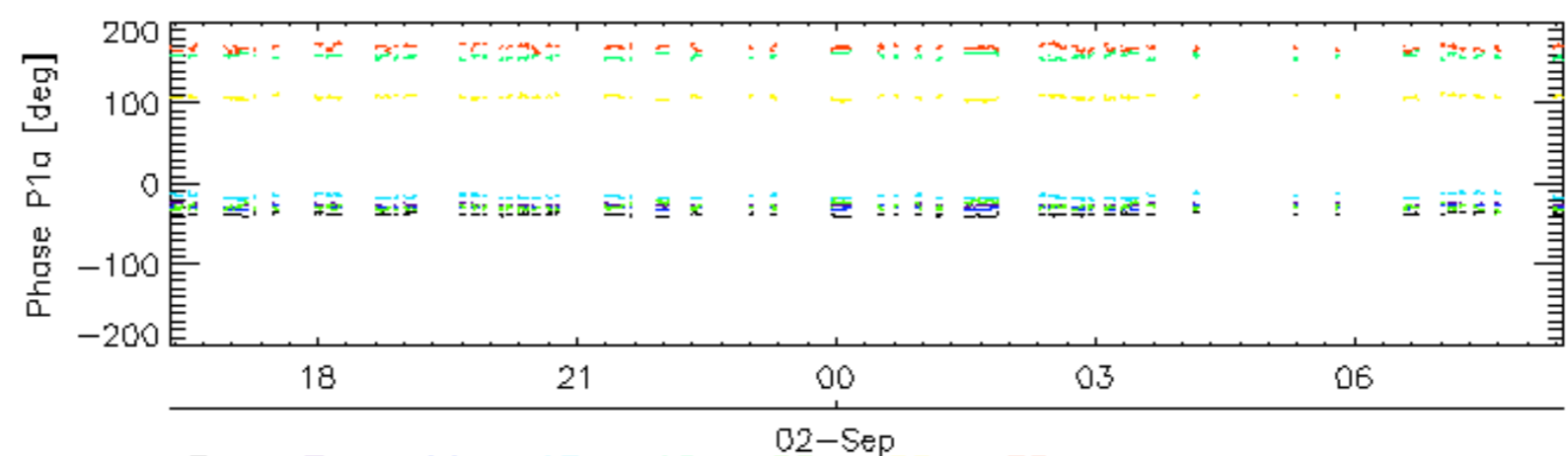
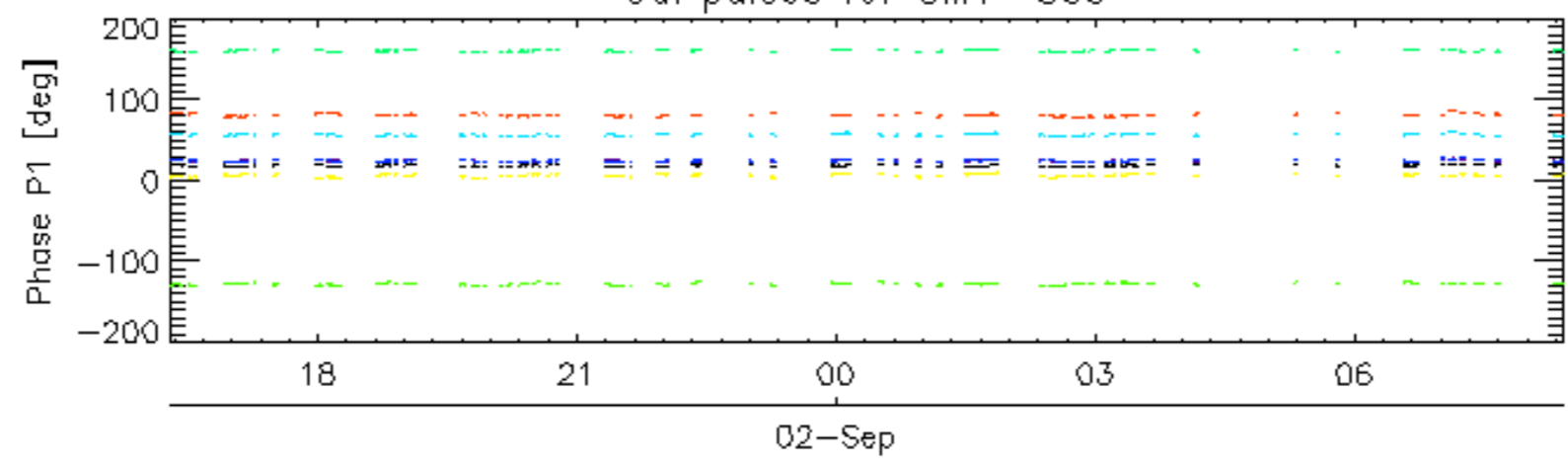
### 7.6 - Doppler evolution versus ANX for GM1

Evolution Doppler error versus ANX

Cal pulses for GM1 SS3

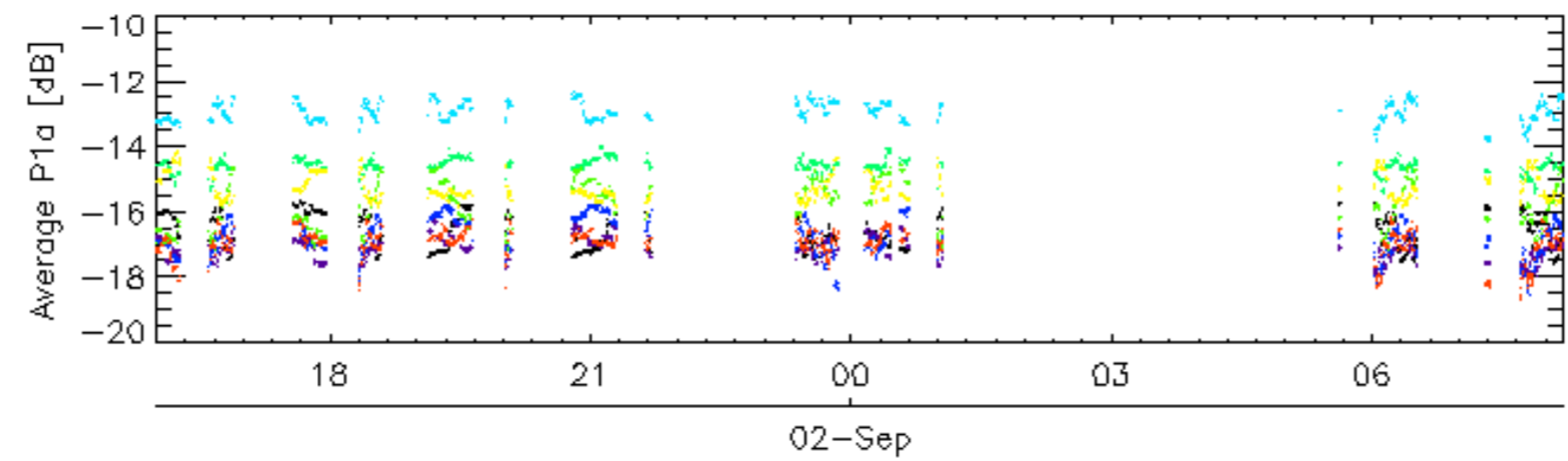
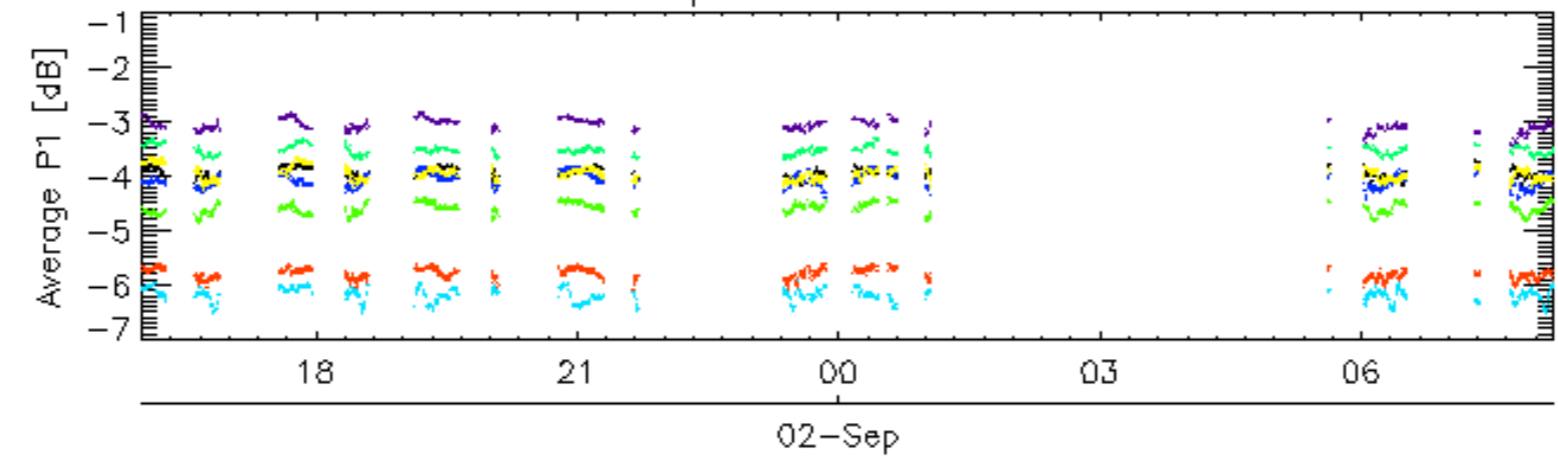


Cal pulses for GM1 SS3

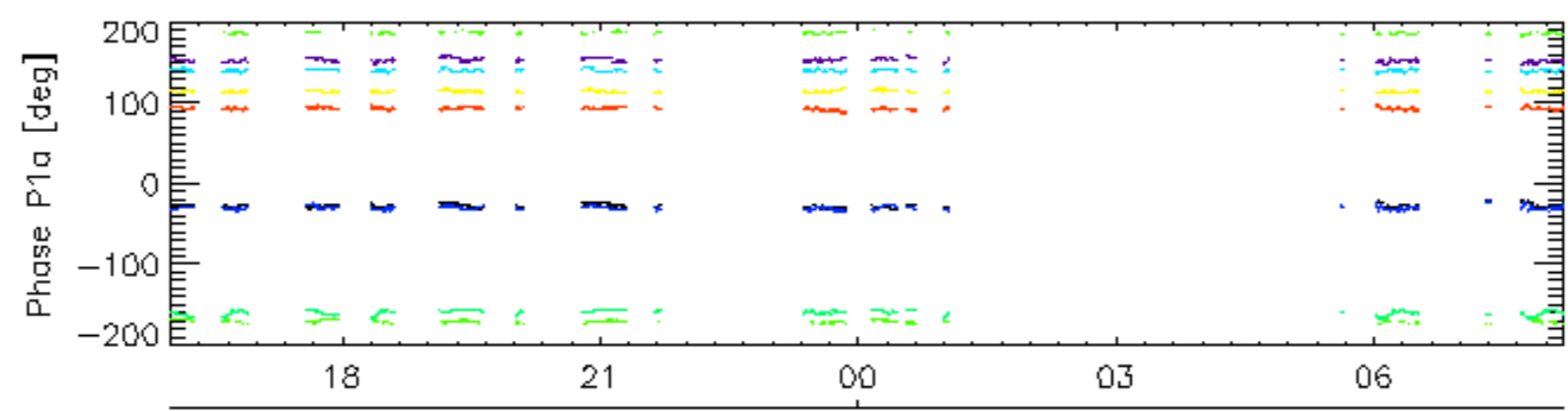
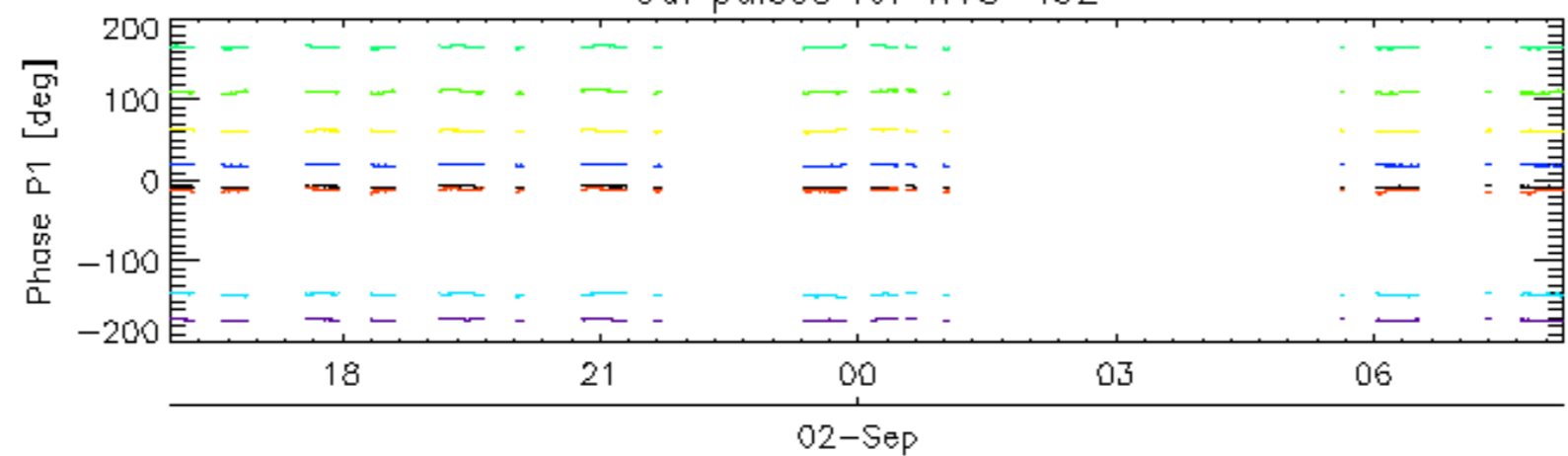


rows: 3 7 11 15 19 22 26 30

Cal pulses for WVS IS2

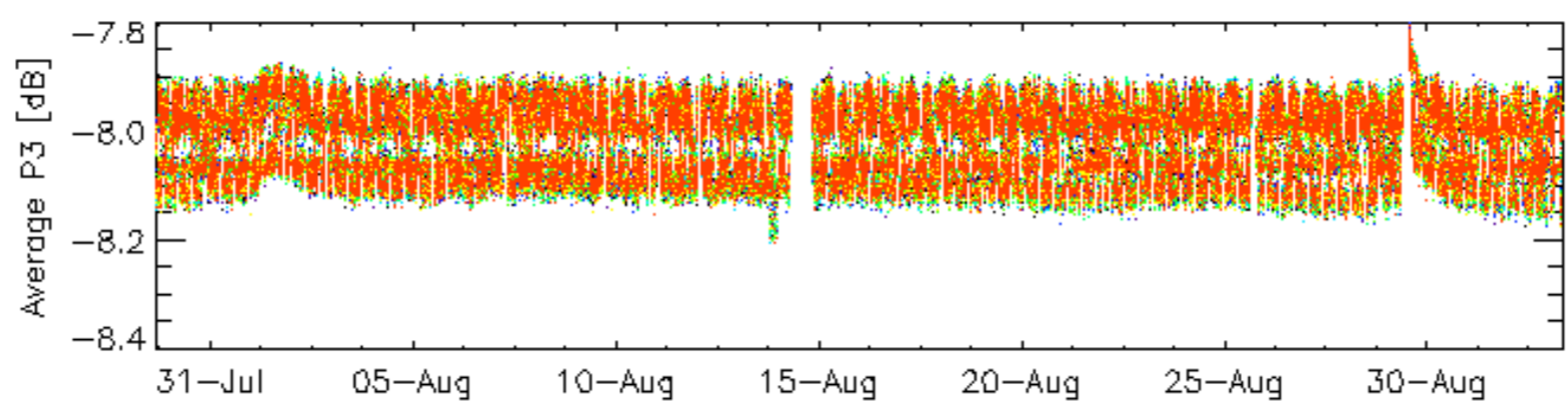
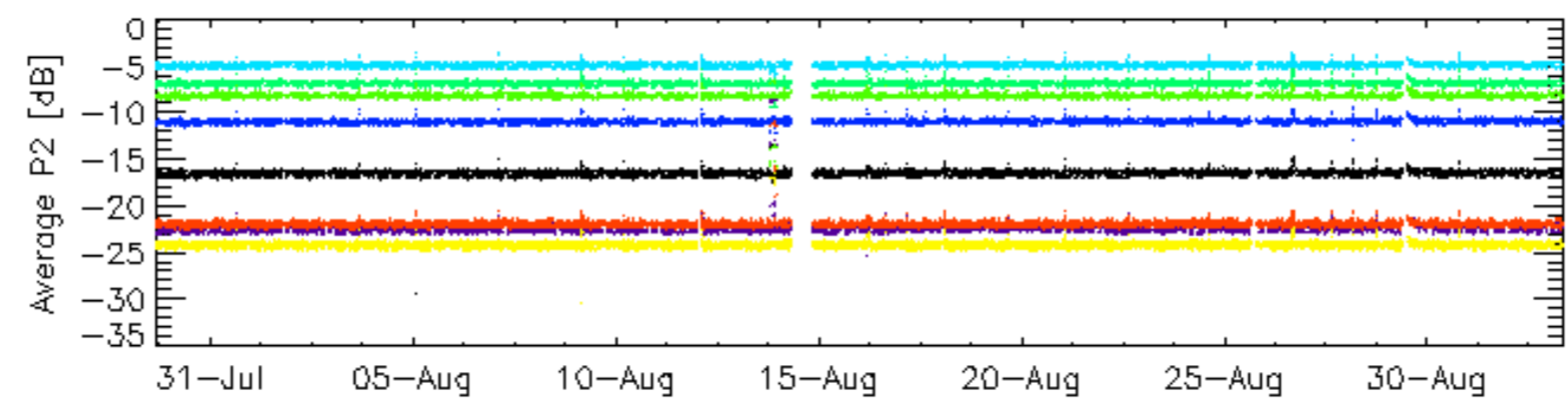
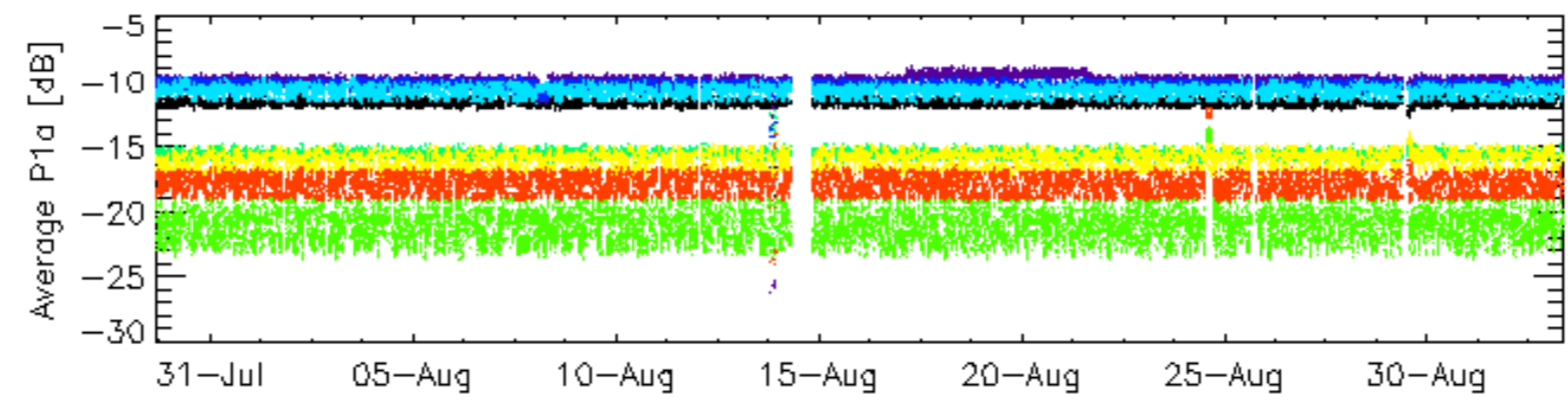
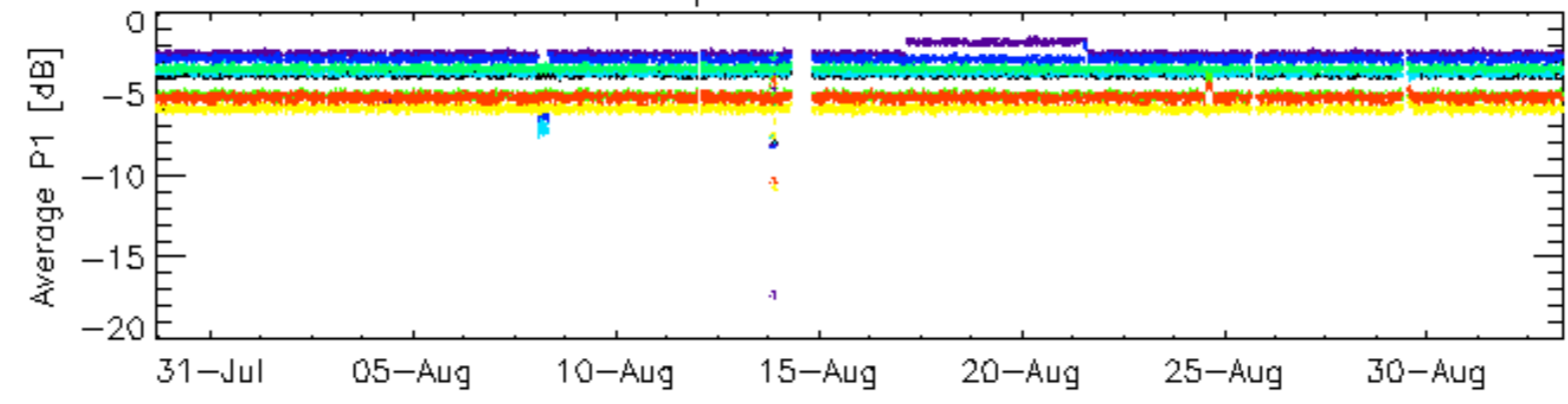


Cal pulses for WVS IS2



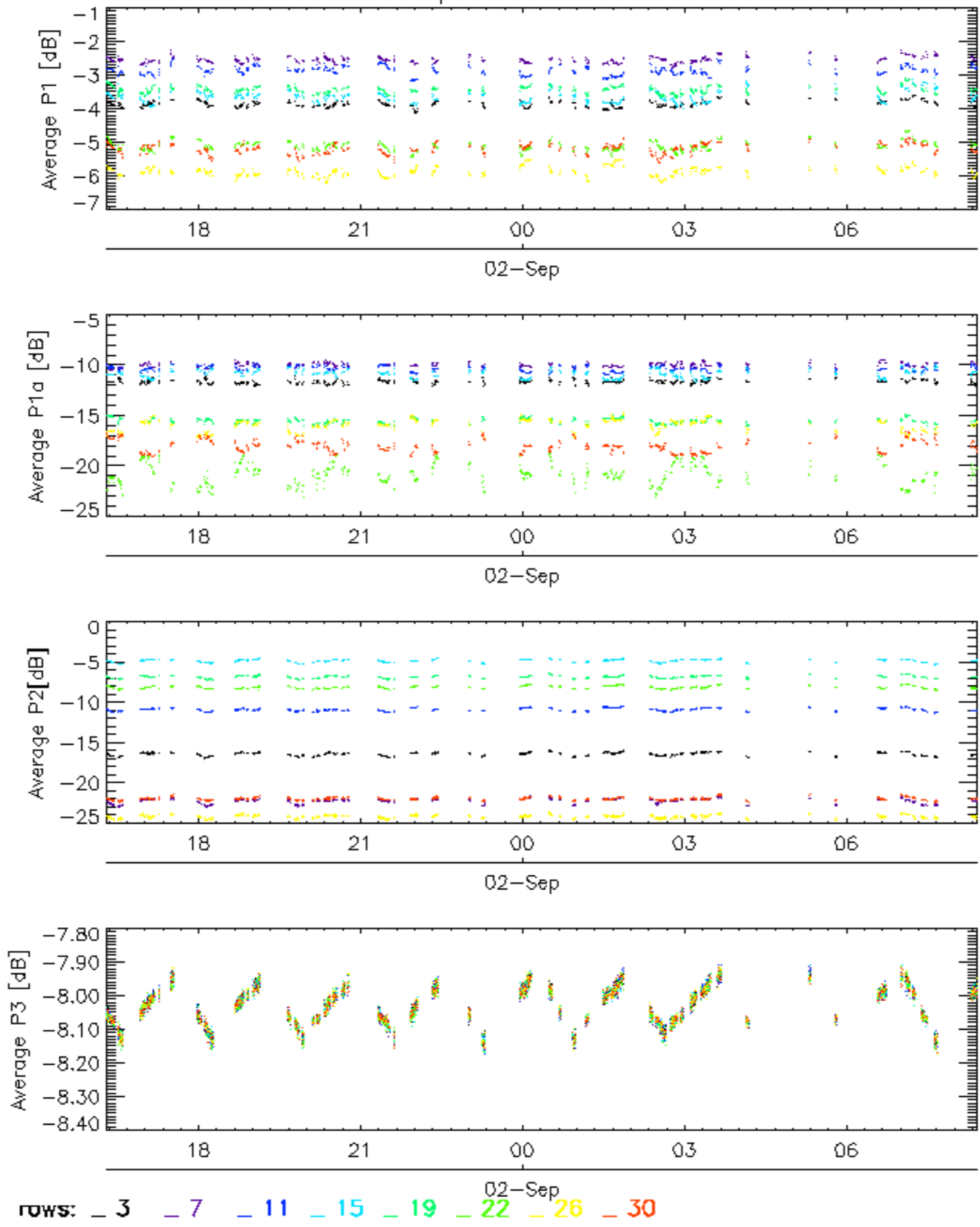
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

### Cal pulses for GM1 SS3

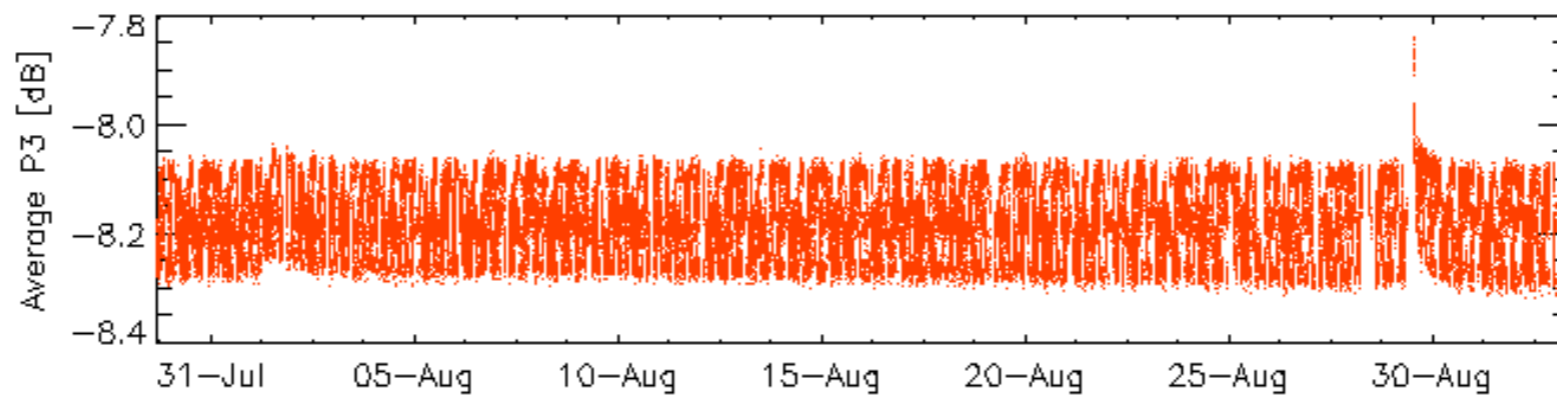
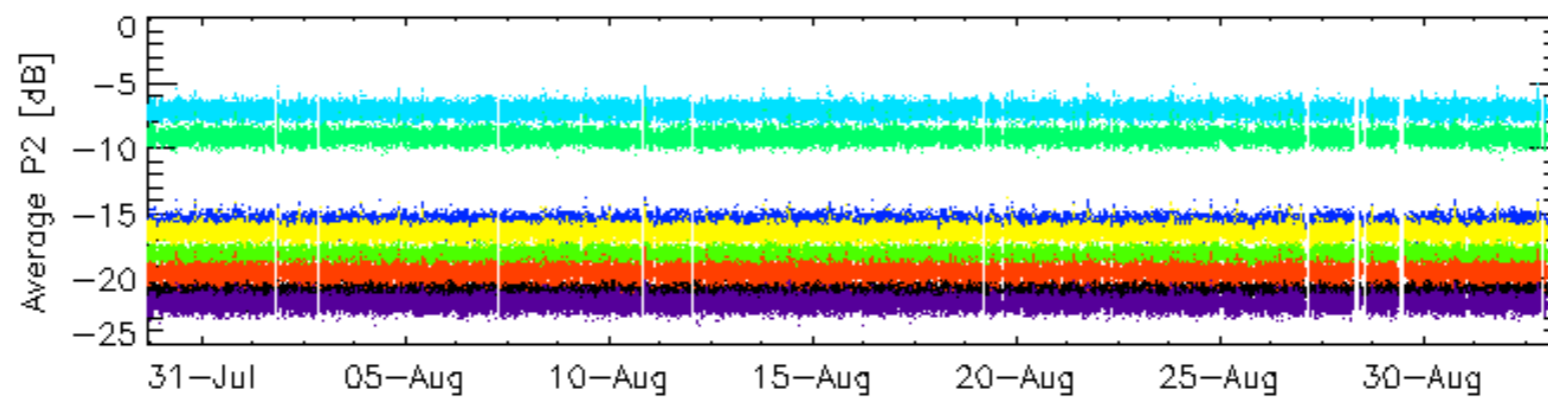
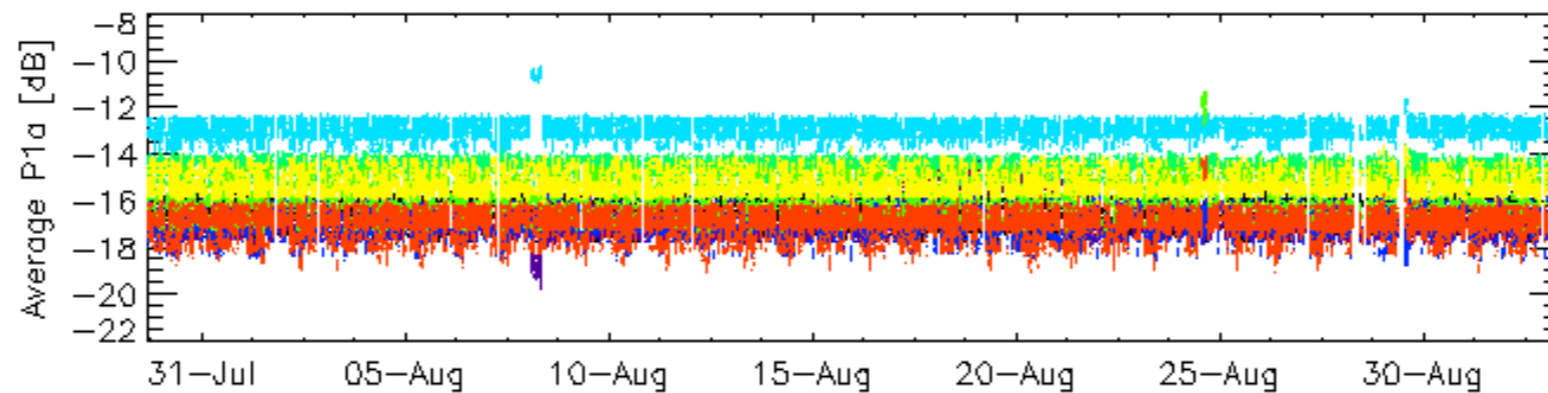
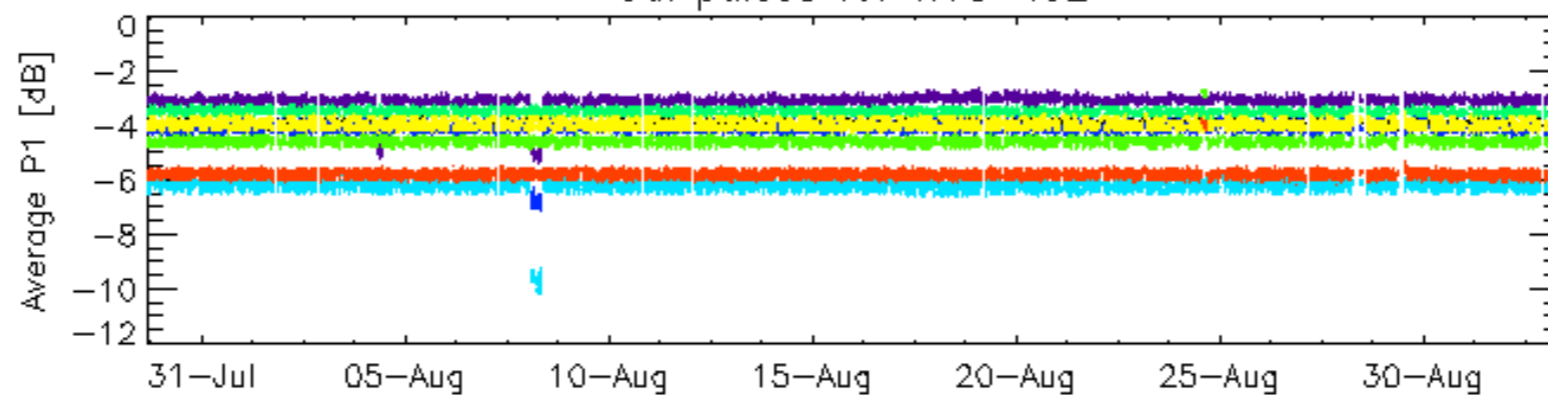


rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

Cal pulses for GM1 SS3

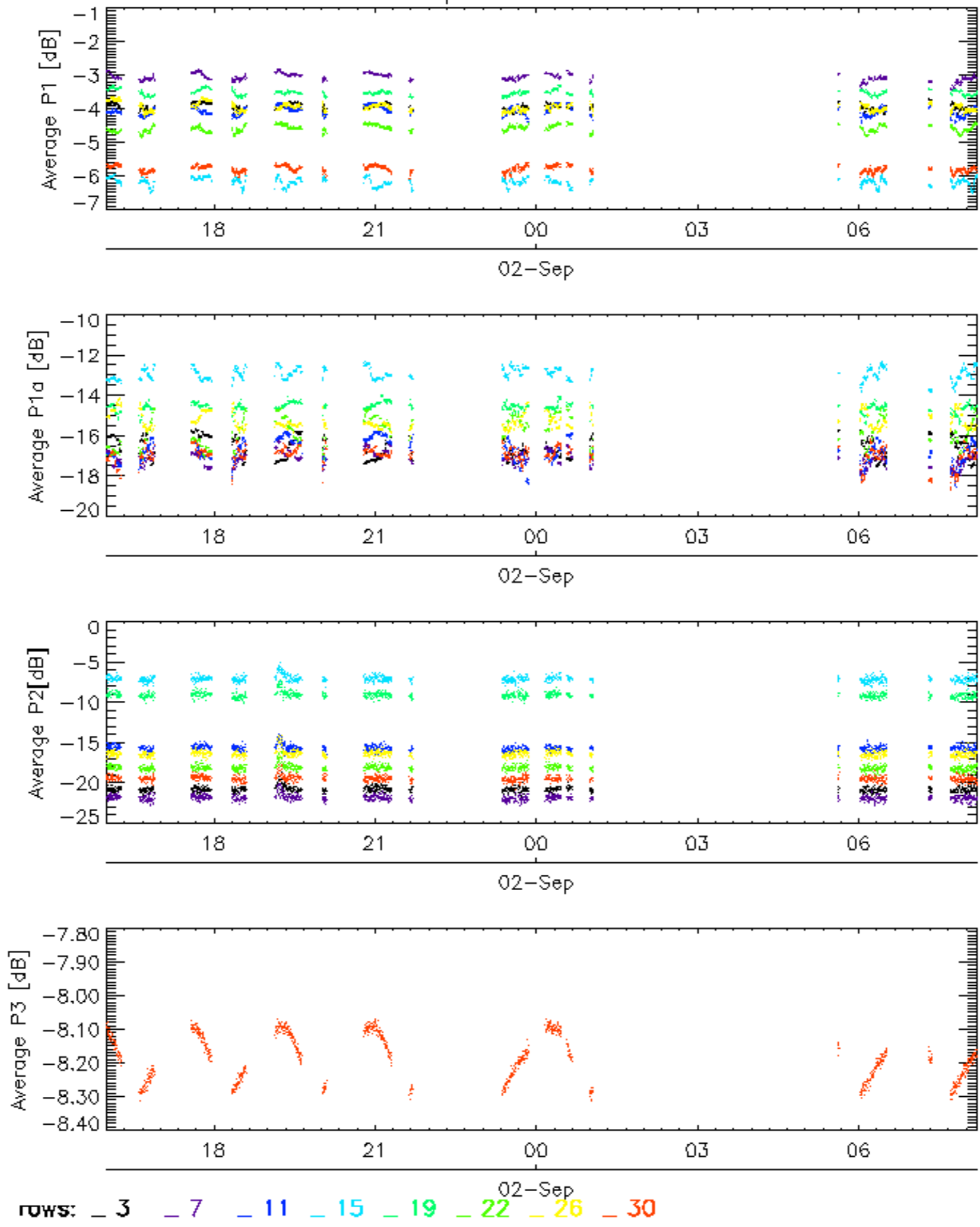


Cal pulses for WVS IS2



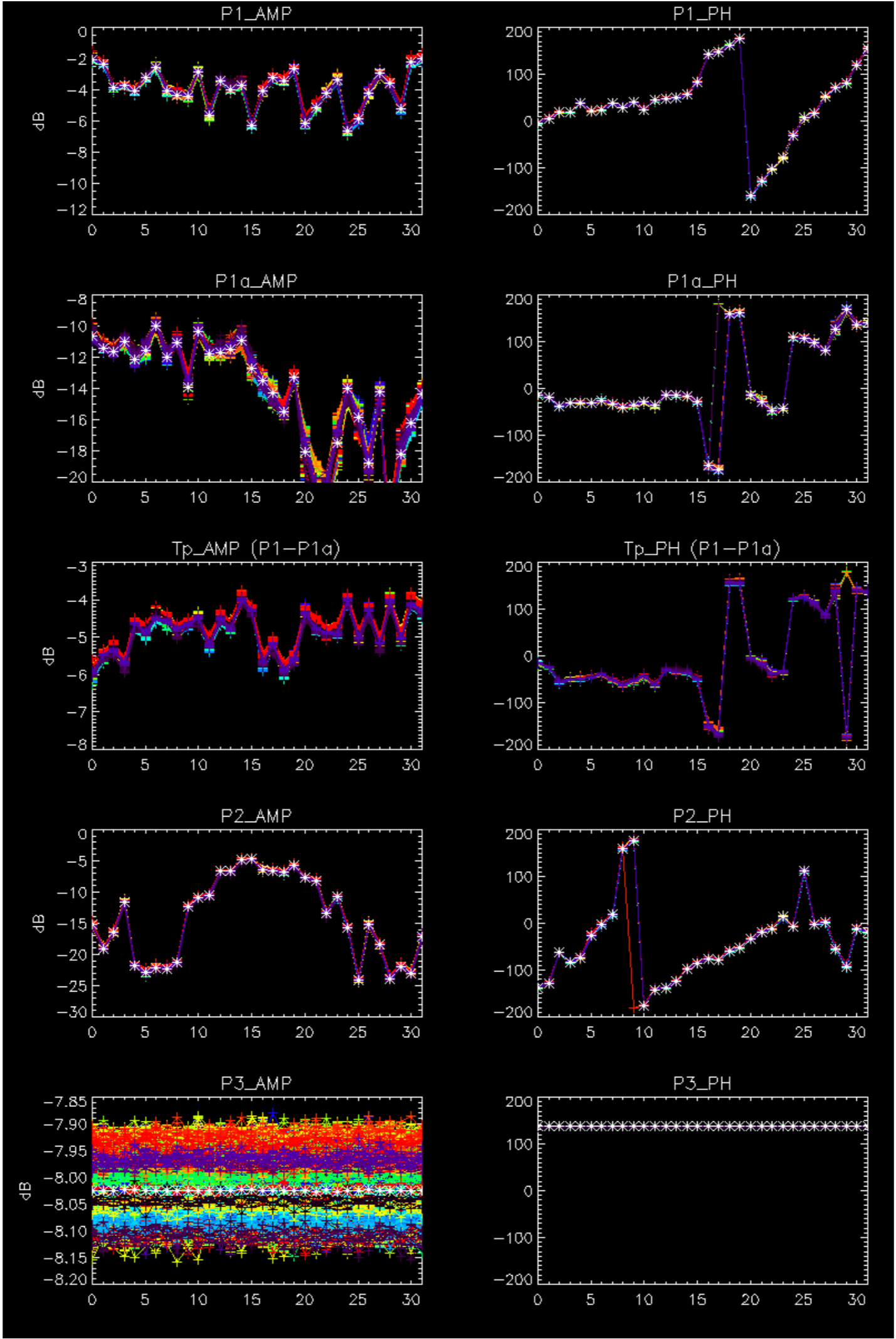
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

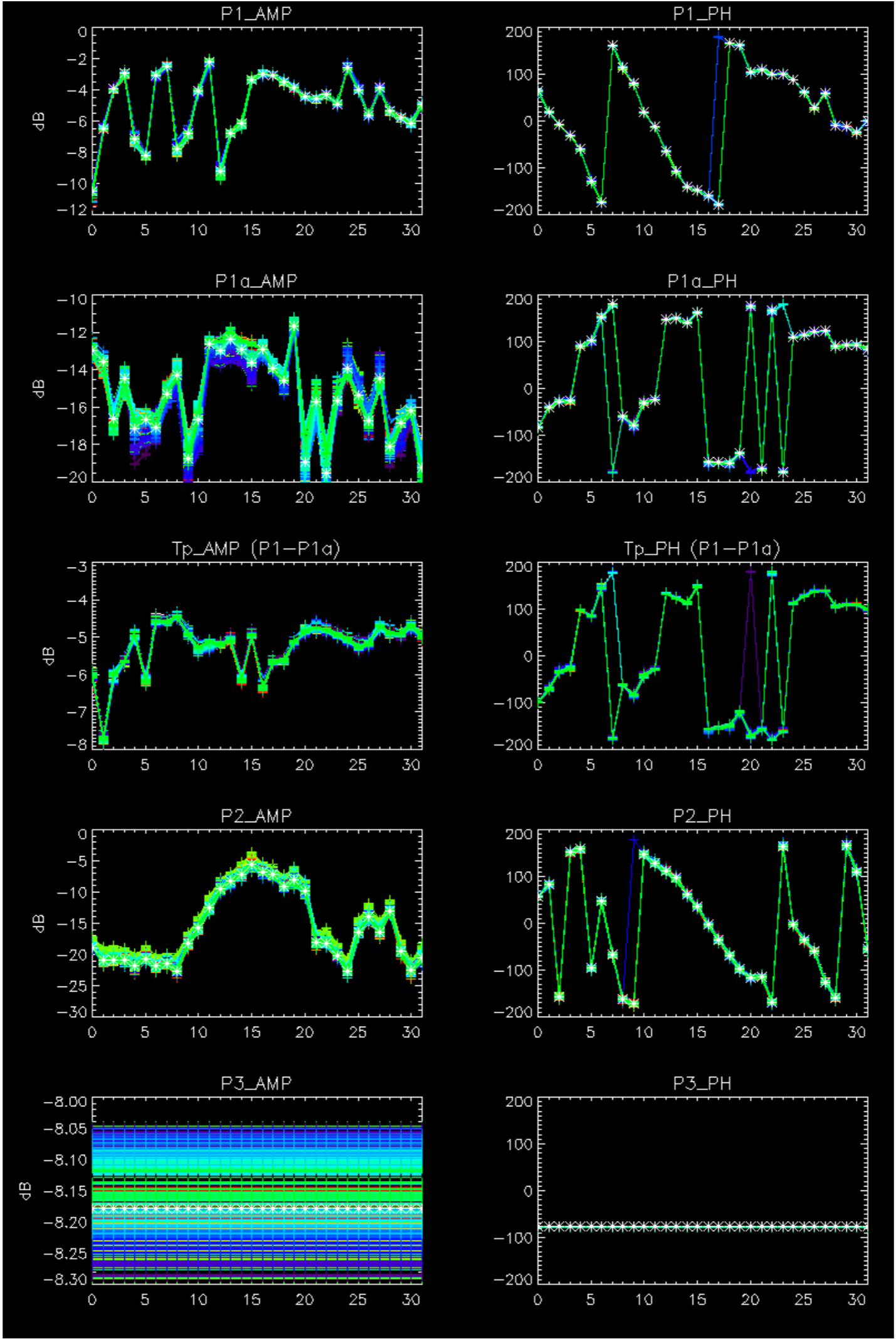
Cal pulses for WVS IS2



No anomalies observed.



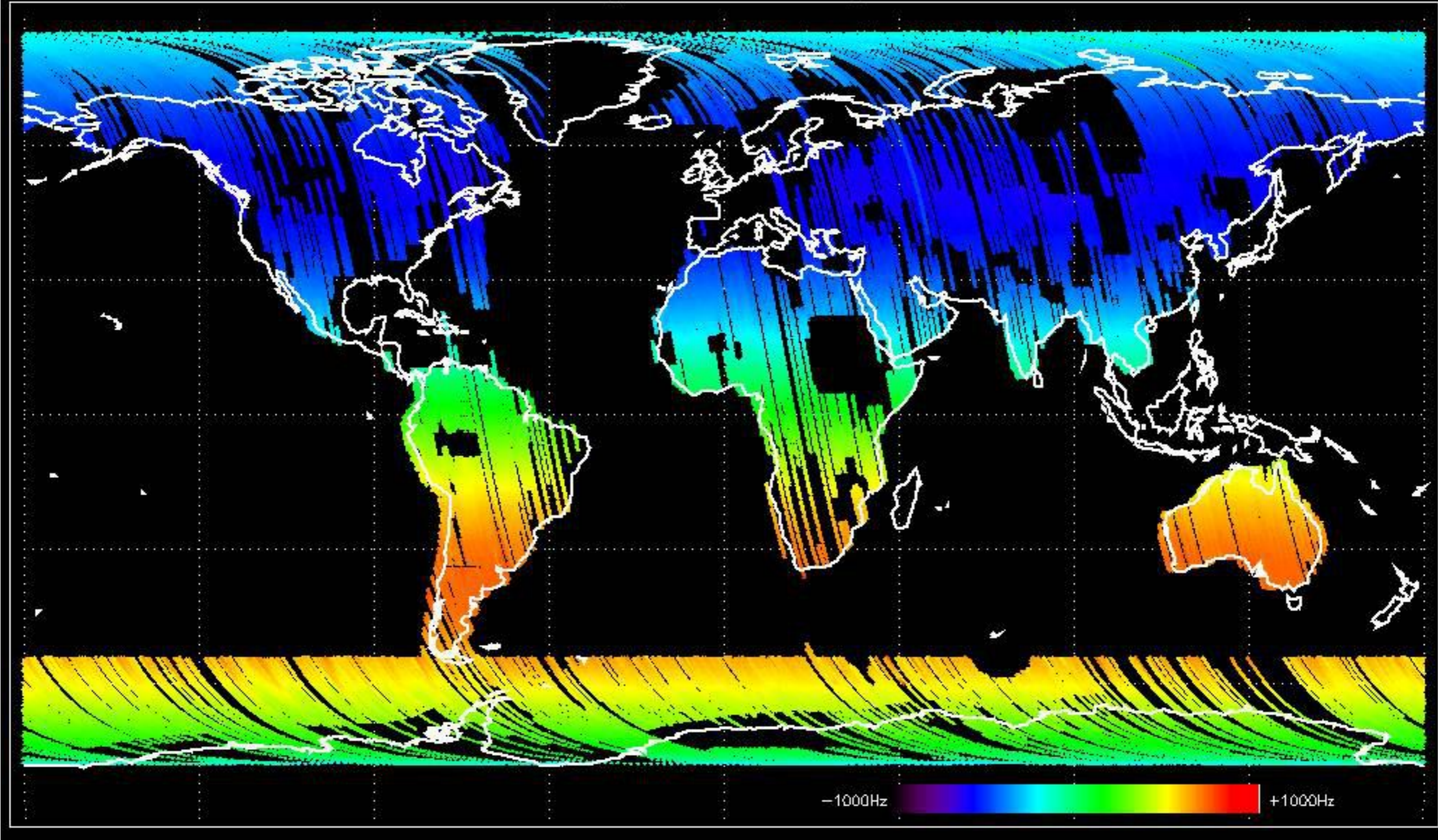




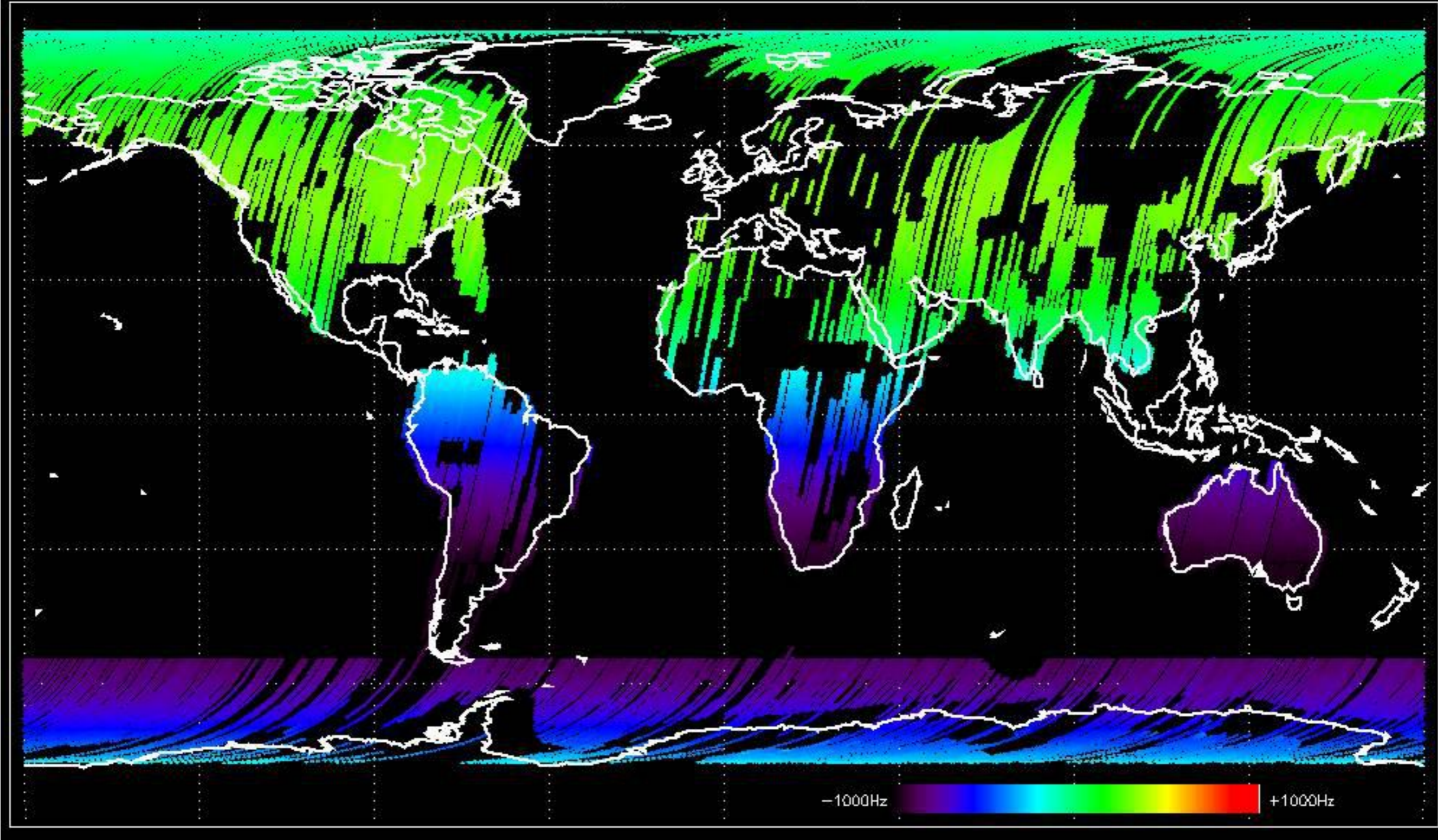
- Stable wave internal calibration pulses gain and phase.
- Stable raw data statistics.
- Nominal Doppler behavior.



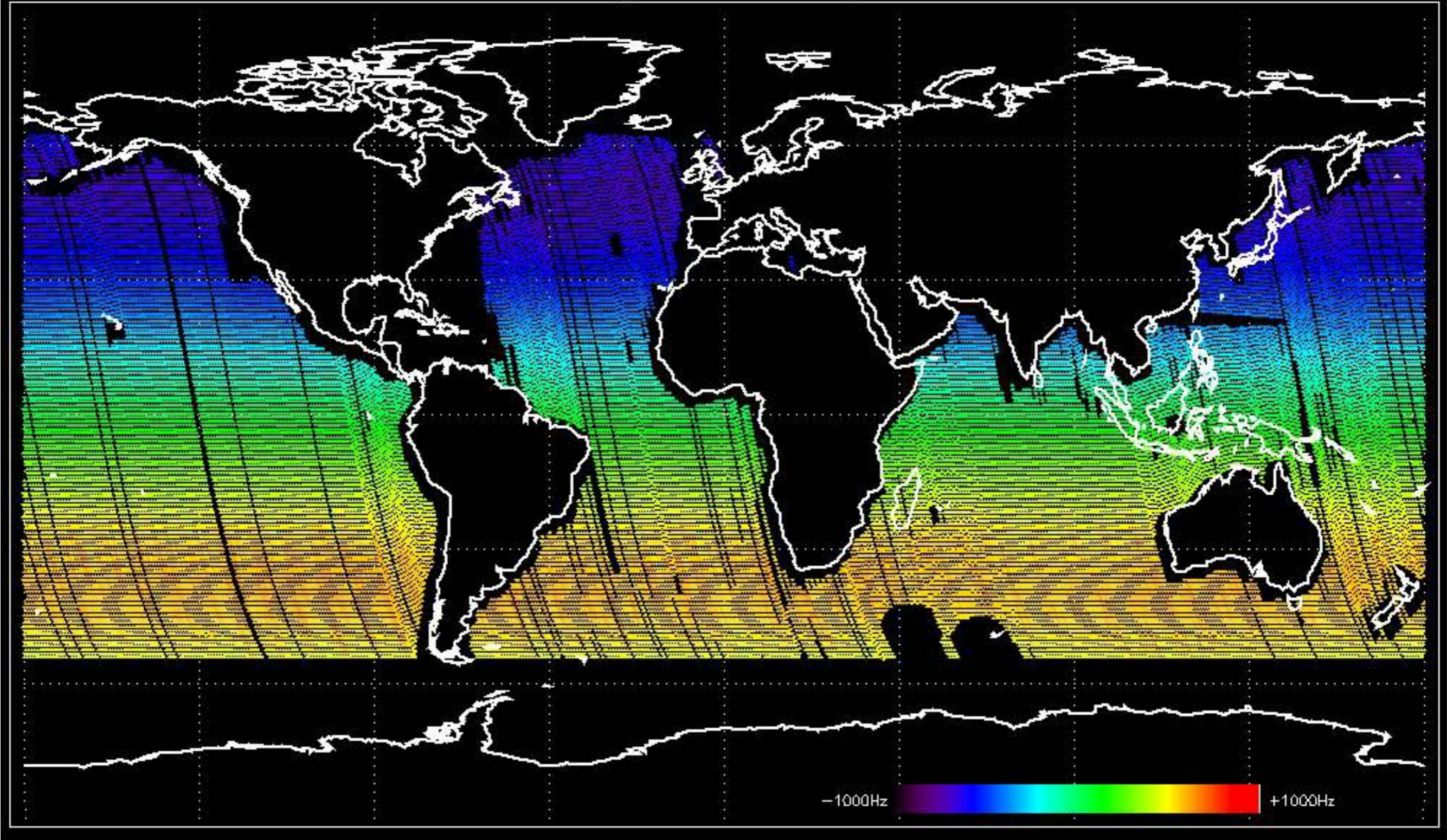
Doppler 'GM1' 'SS1' ascending



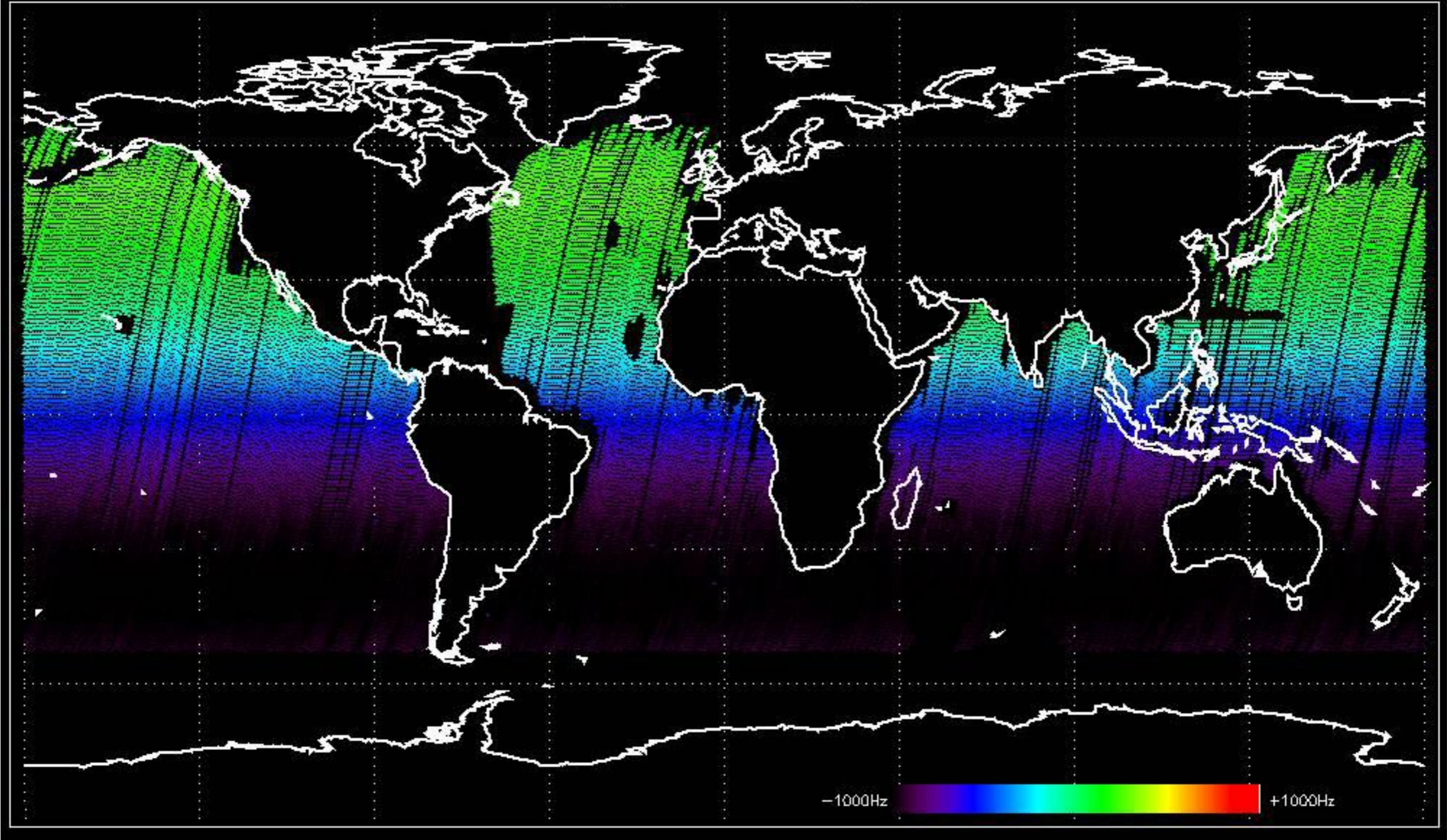
Doppler 'GM1' 'SS1' descending



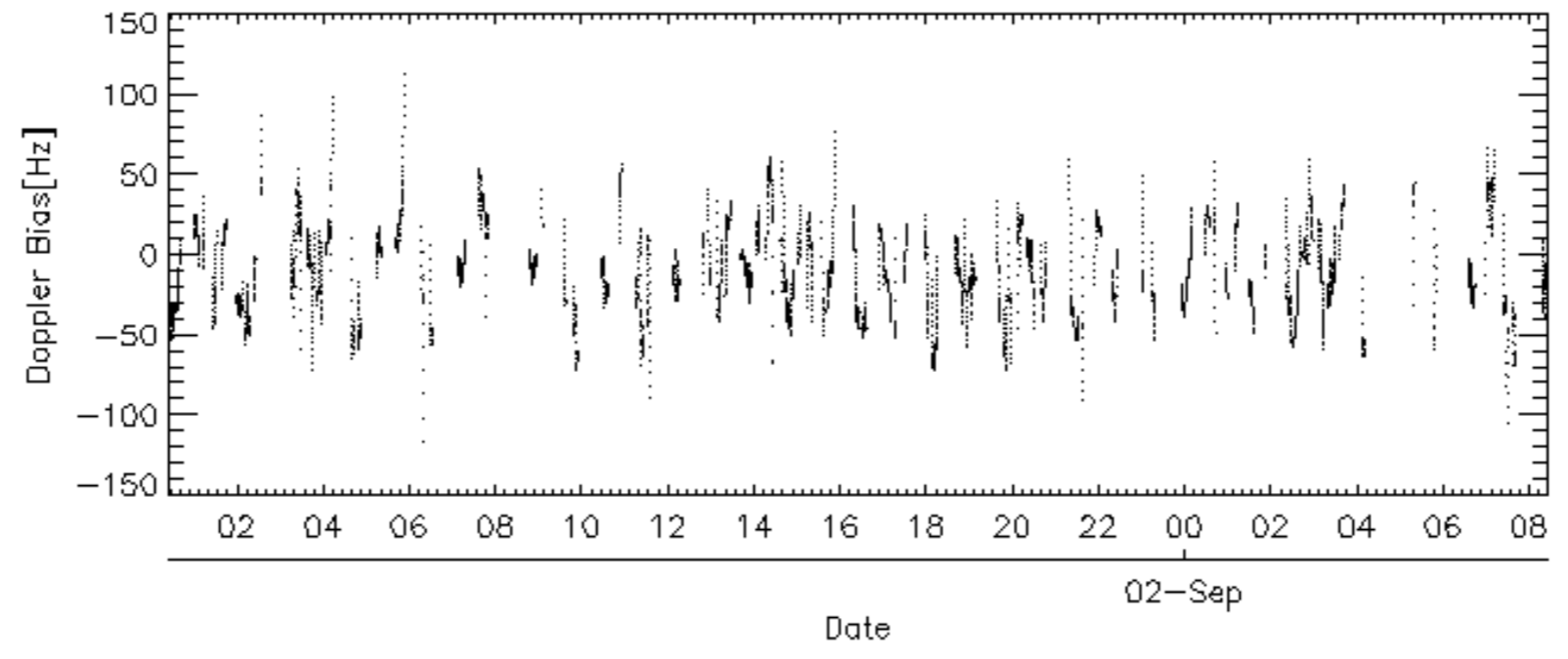
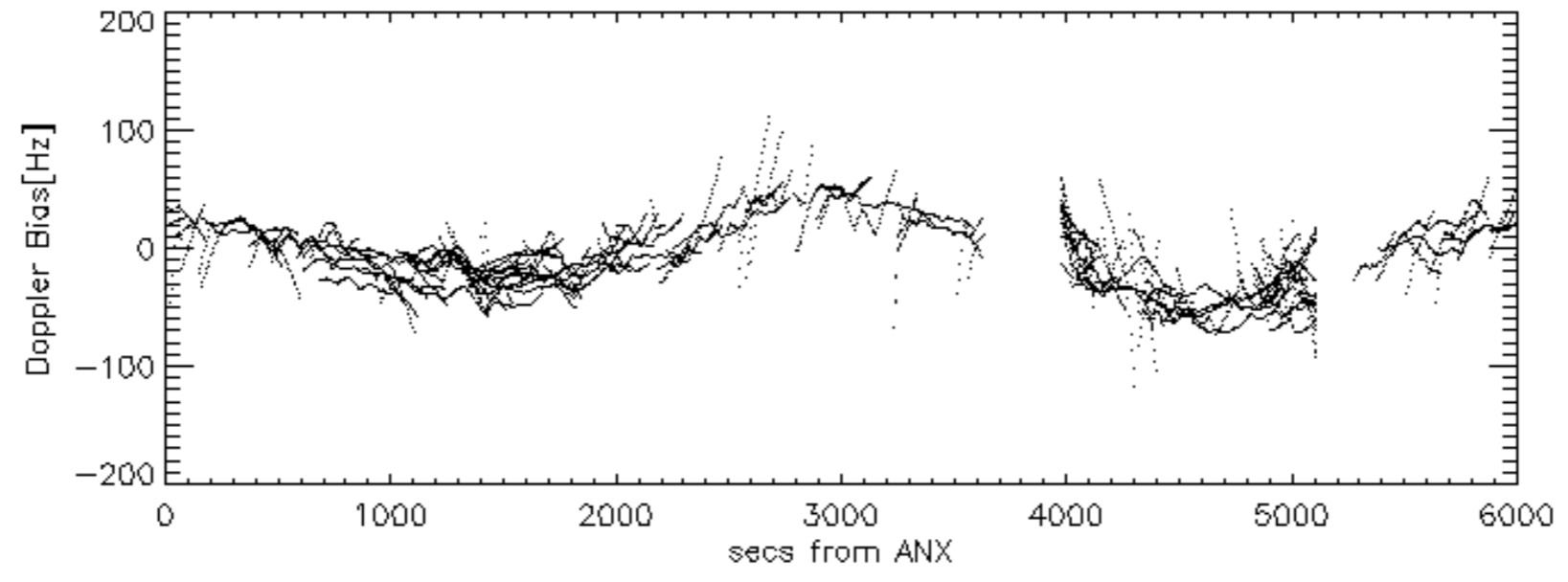
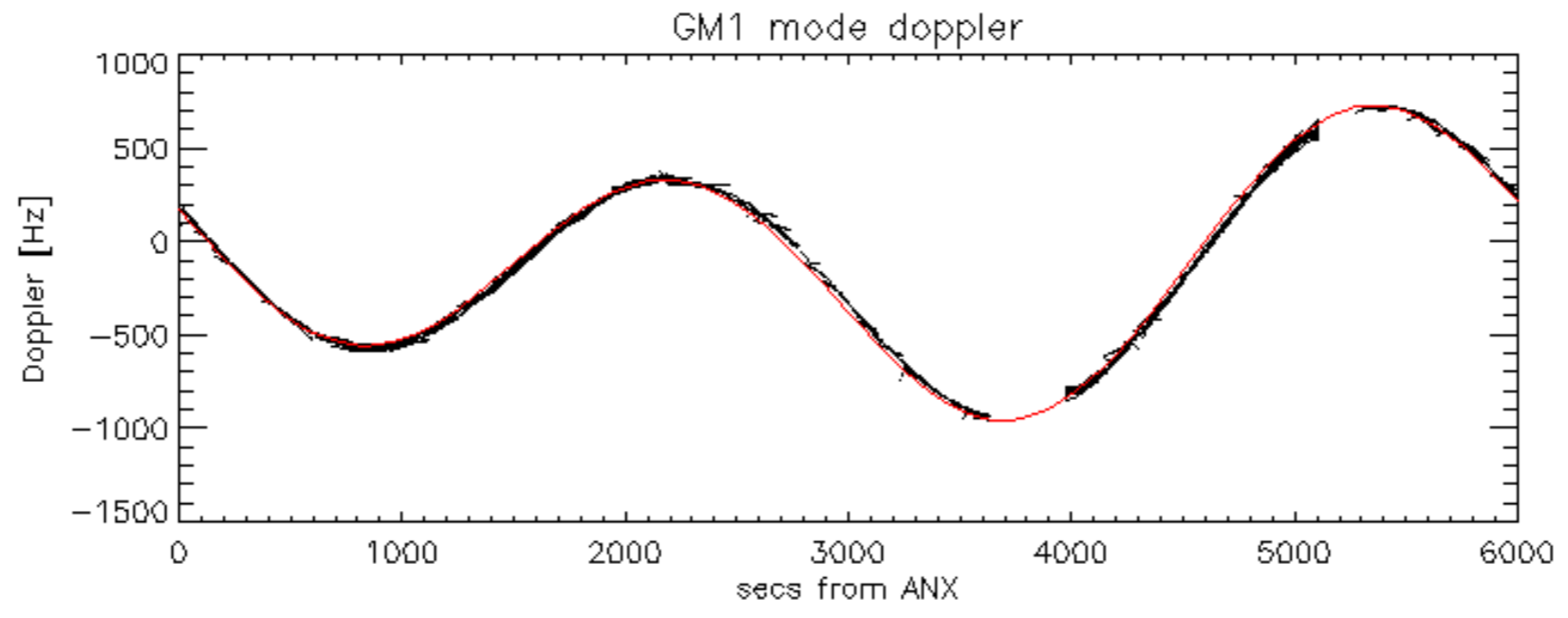
Doppler 'WVS' 'IS2' ascending

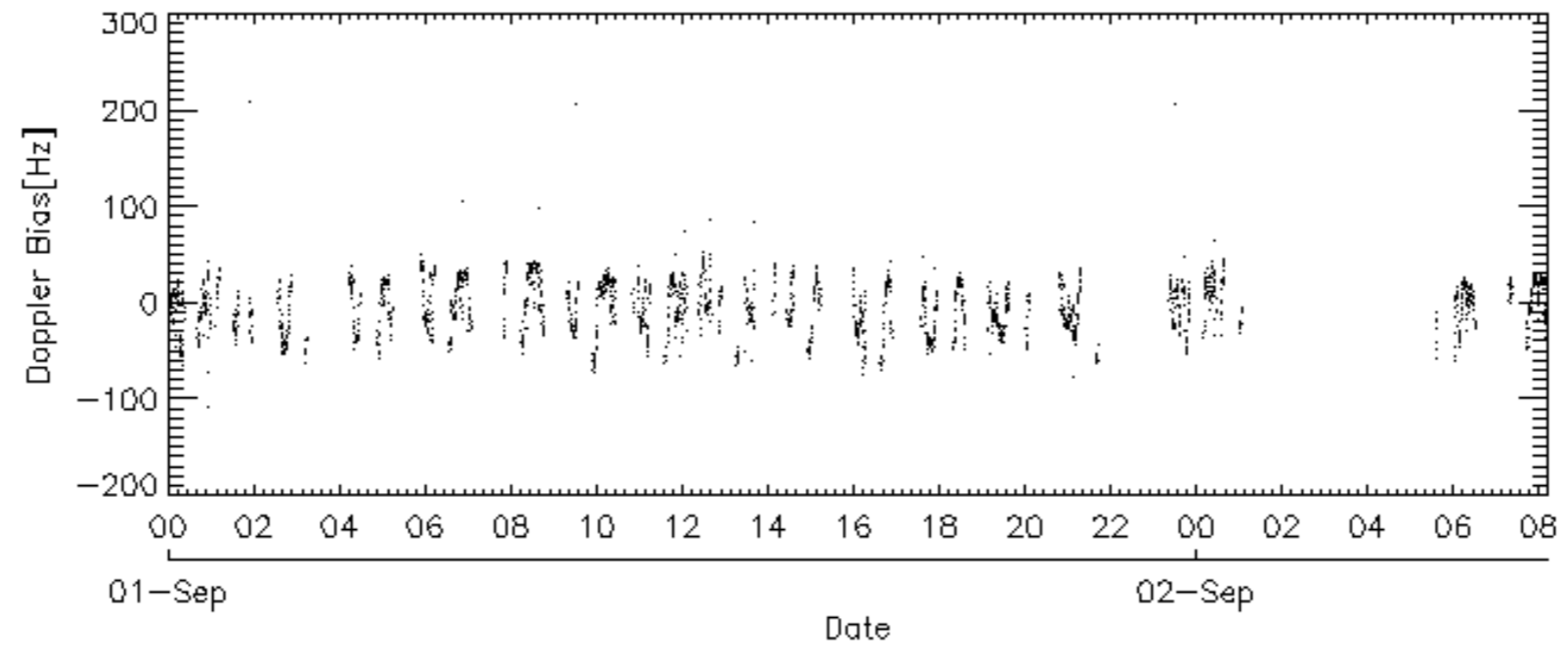
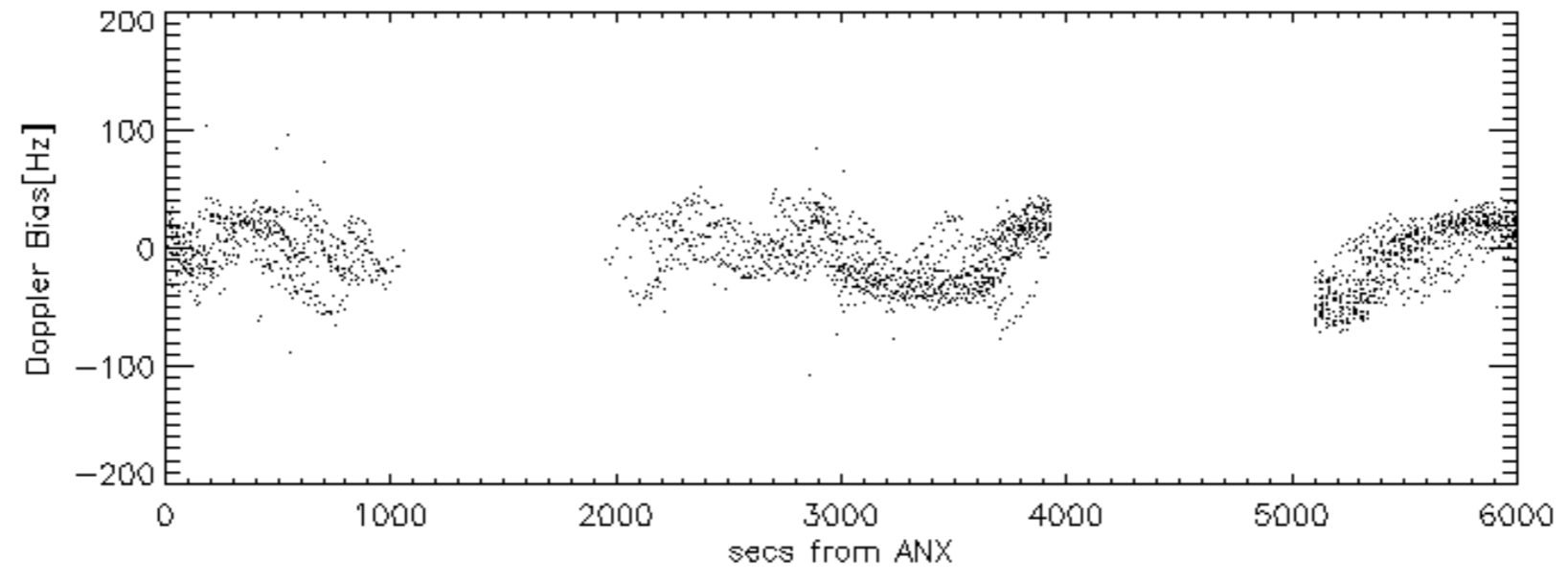
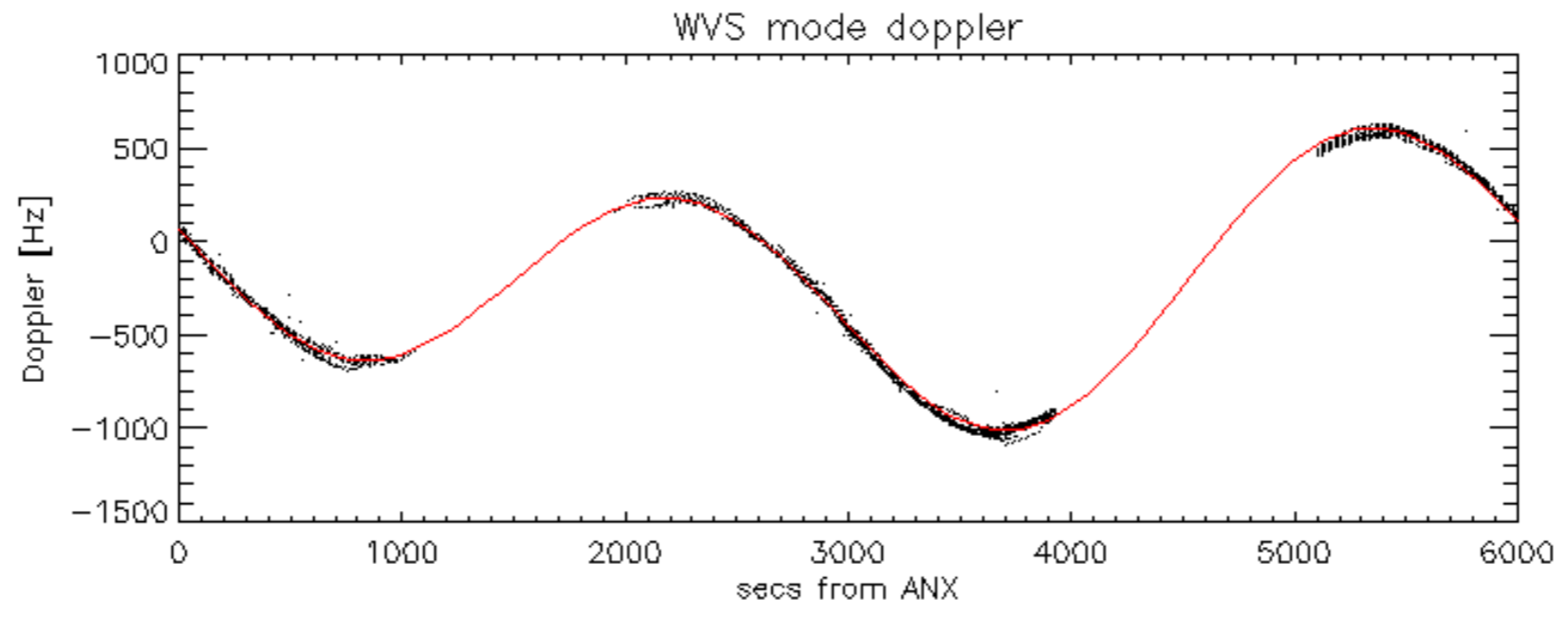


Doppler 'WVS' 'IS2' descending

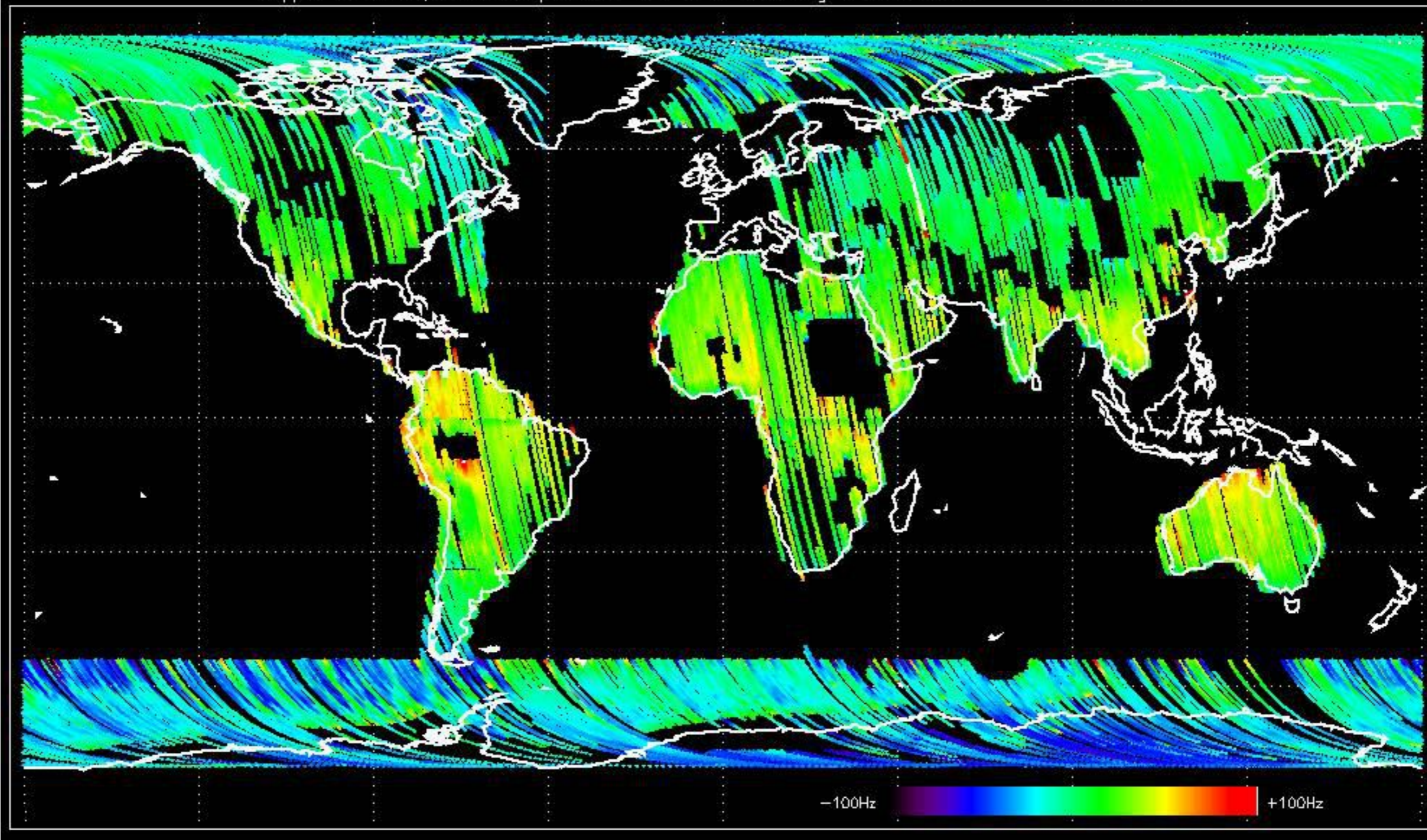




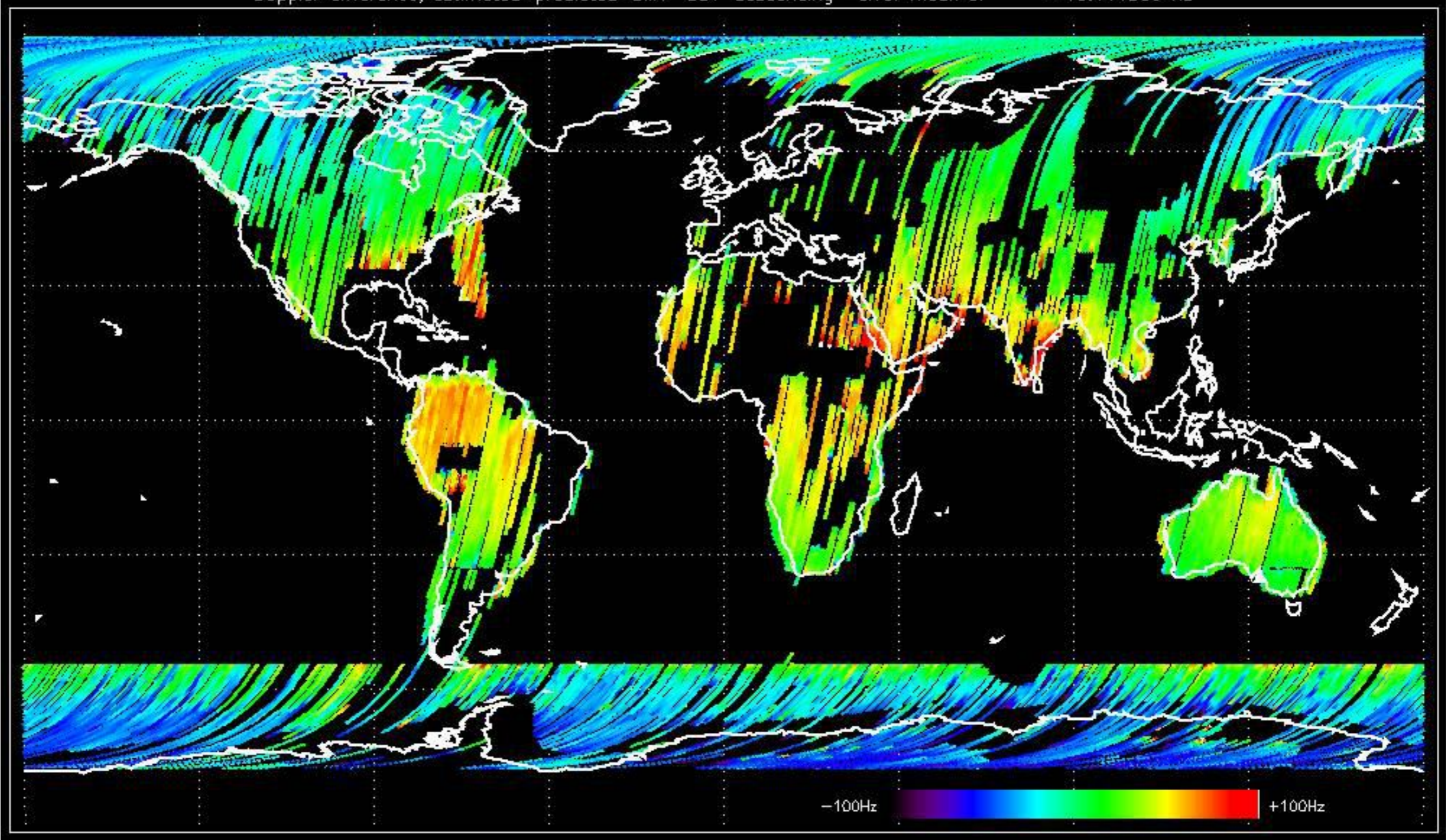




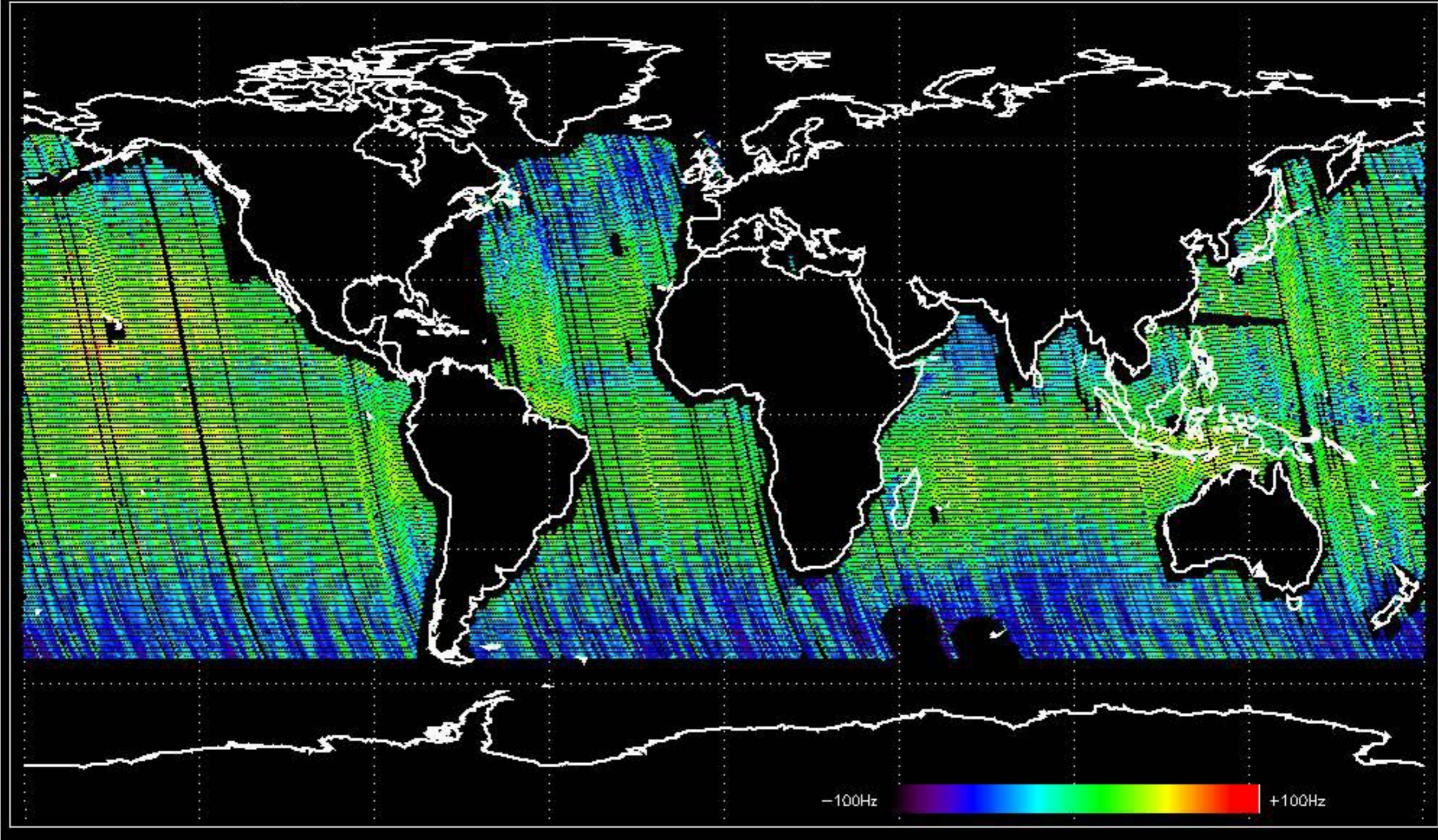
Doppler difference, estimated-predicted 'GM1' 'SS1' ascending -error mean of -18.781397 Hz



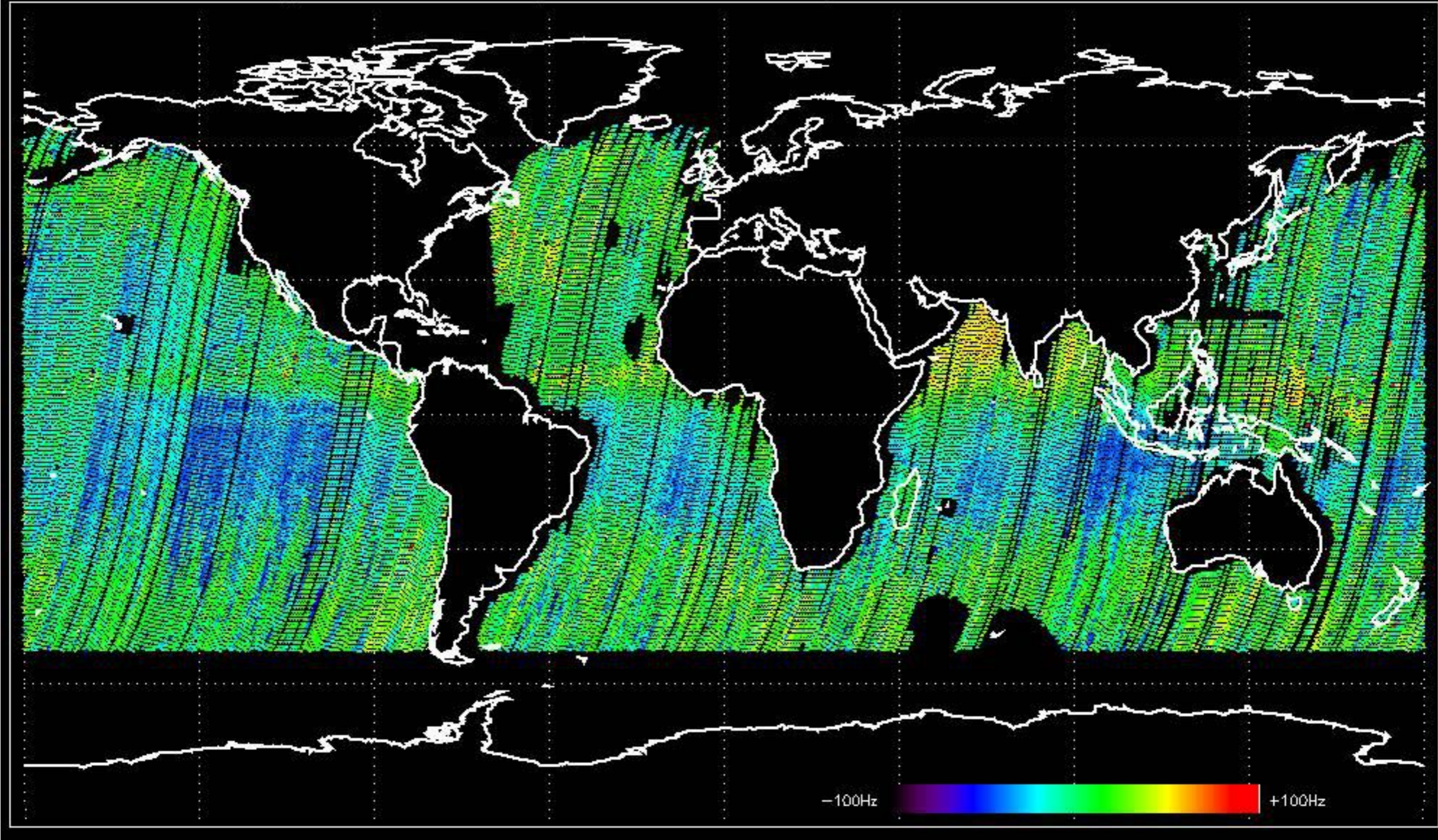
Doppler difference, estimated-predicted 'GM1' 'SS1' descending -error mean of -10.144366 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' ascending -error mean of -4.4403561 Hz



Doppler difference, estimated-predicted 'WVS' 'IS2' descending -error mean of -7.4380517 Hz



No anomalies observed on available MS products:

No anomalies observed.











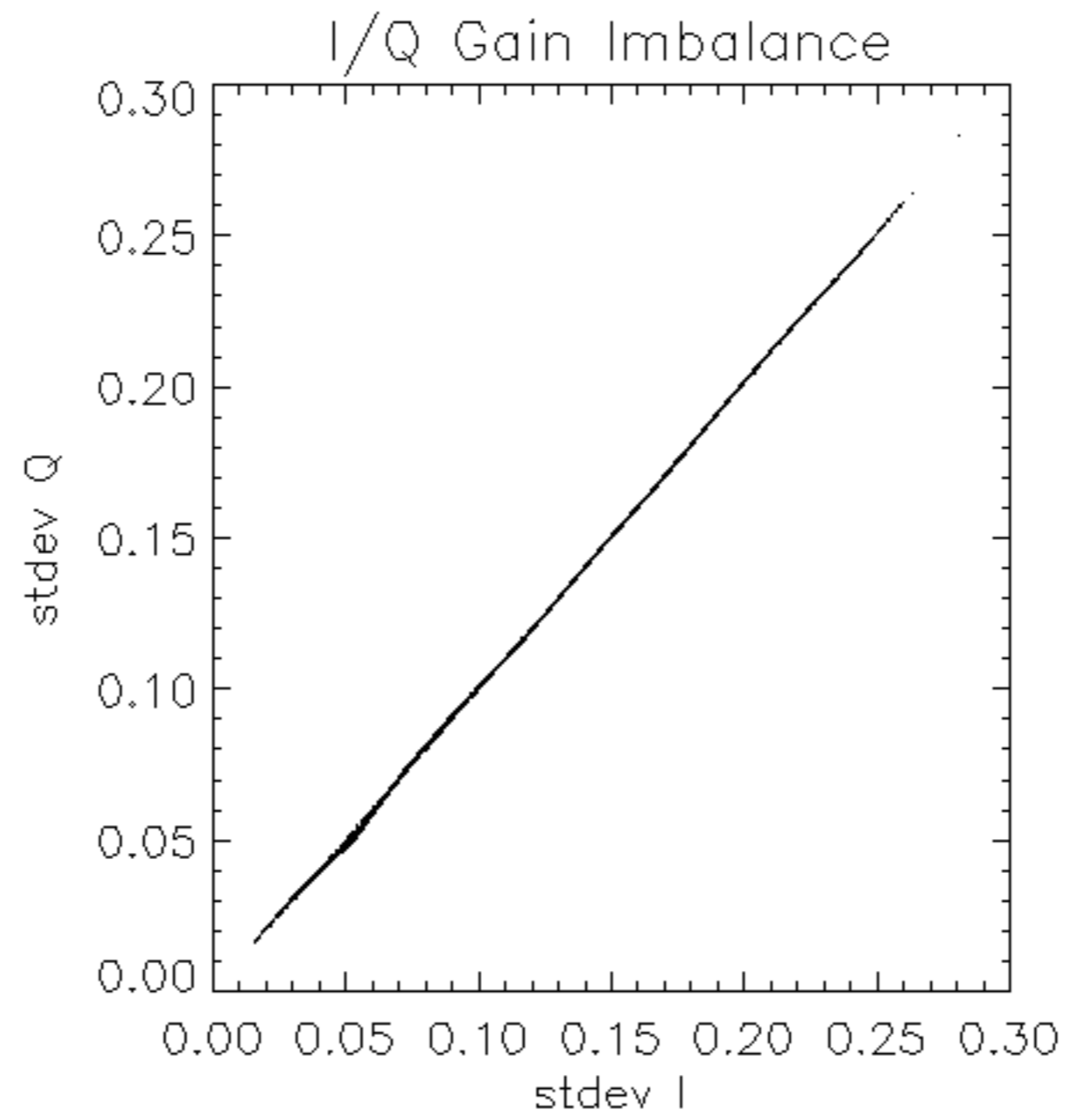


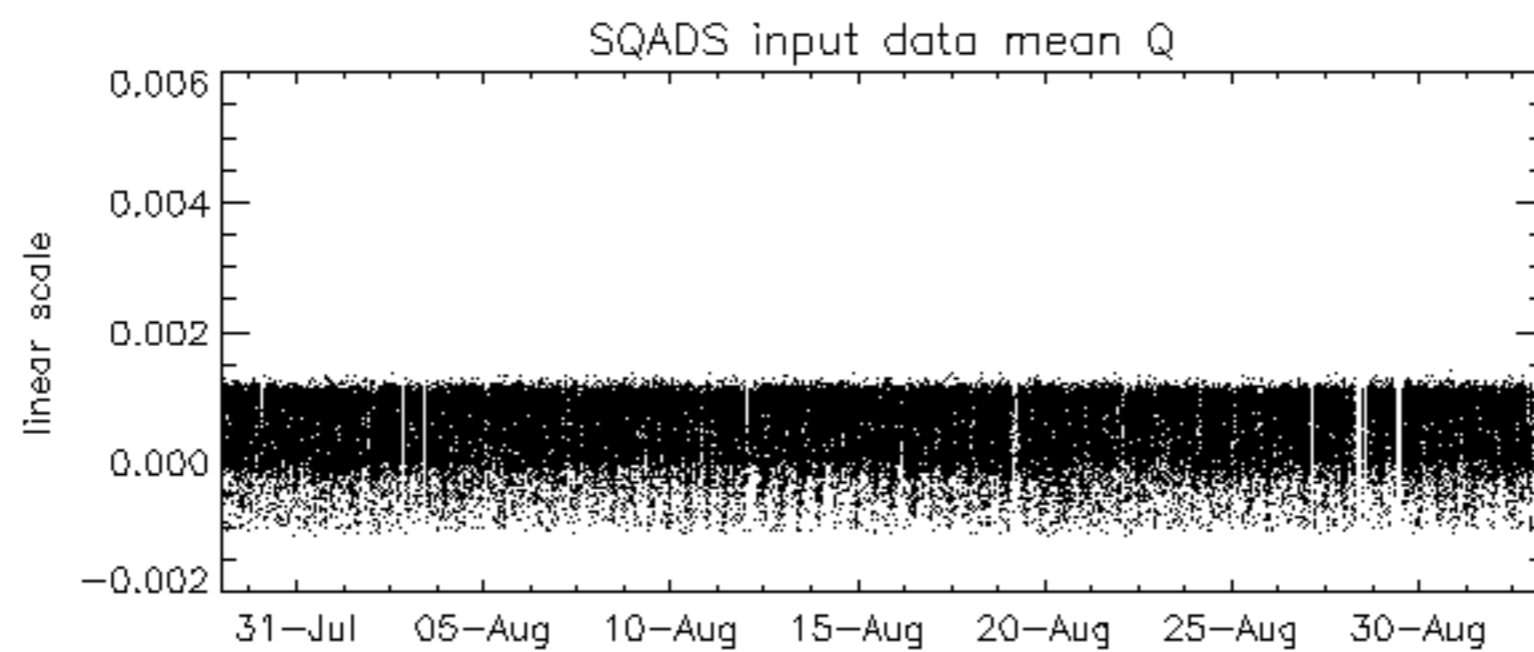
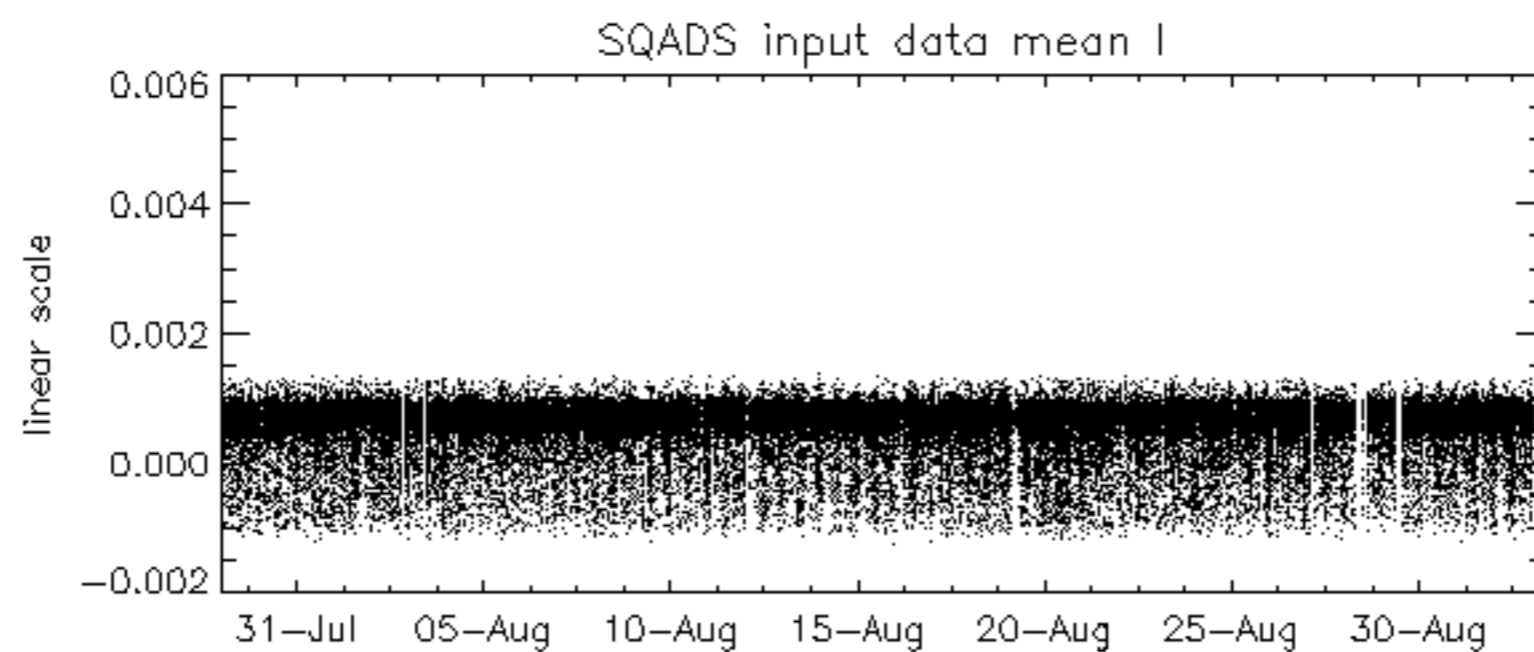
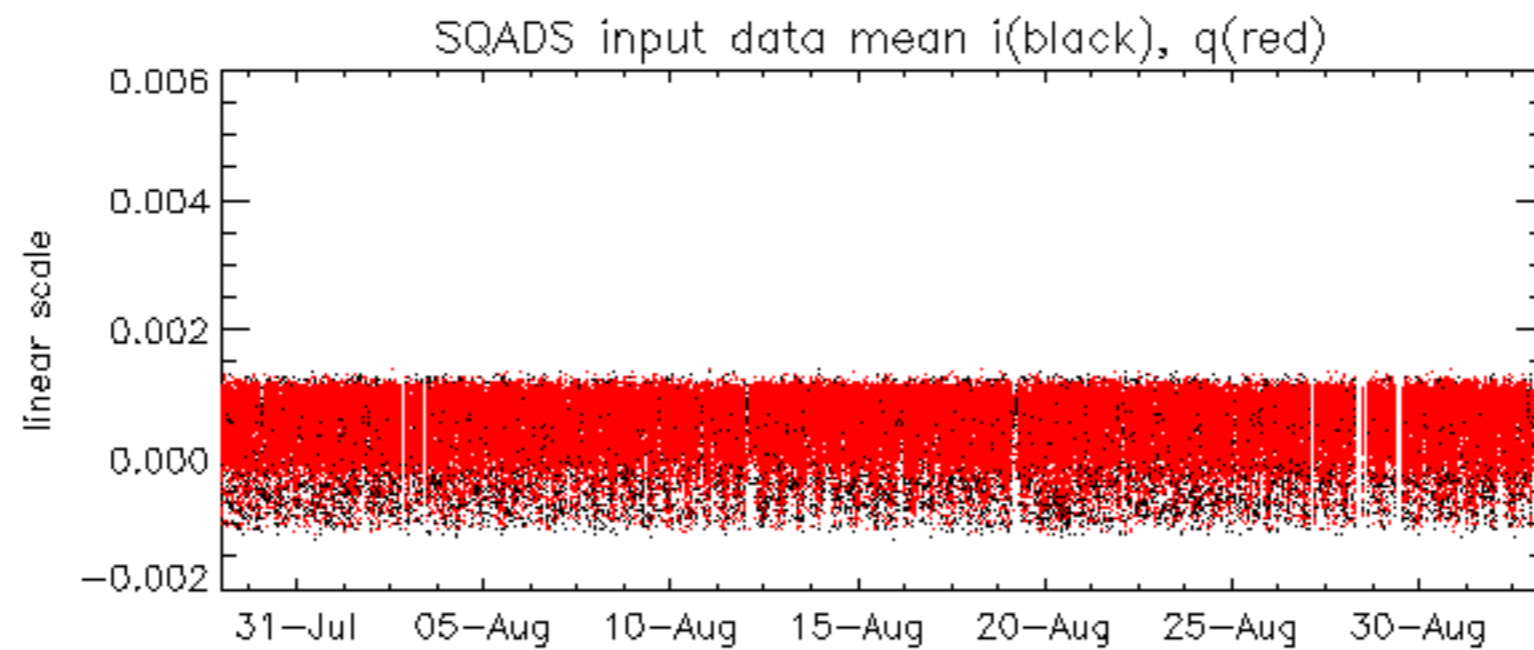


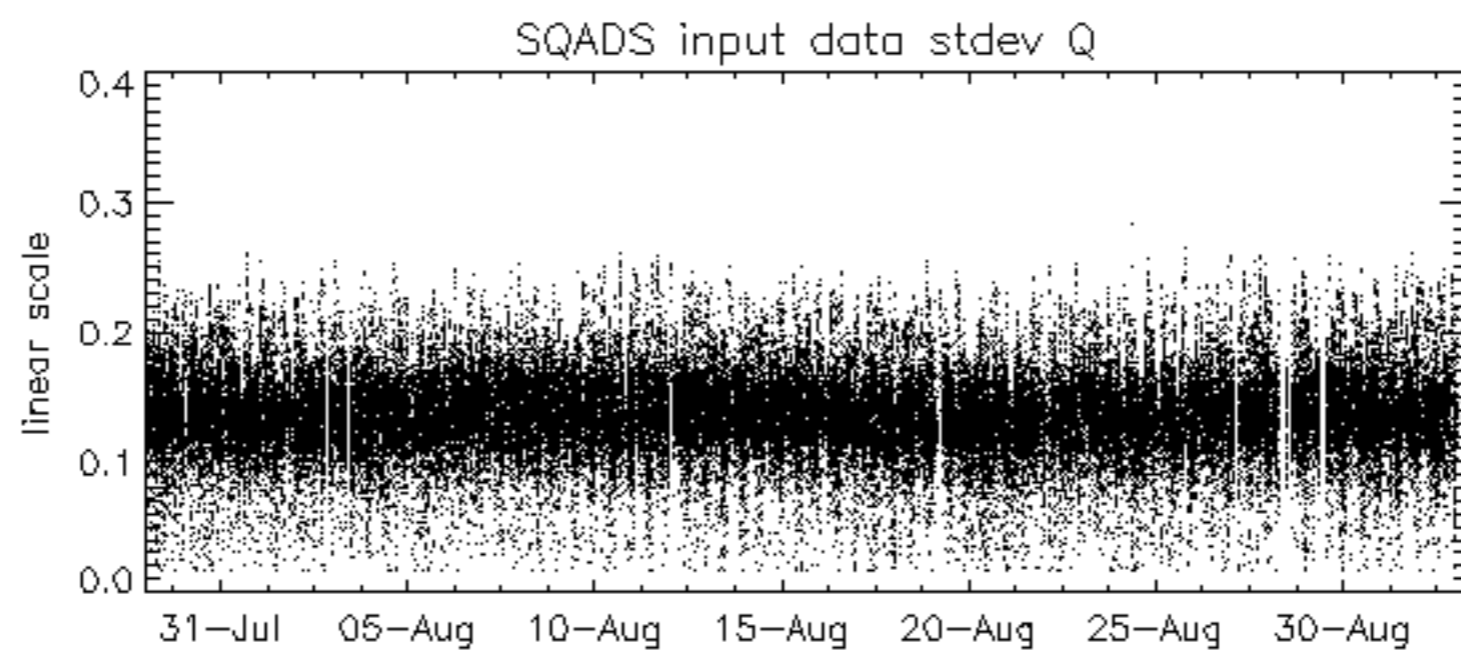
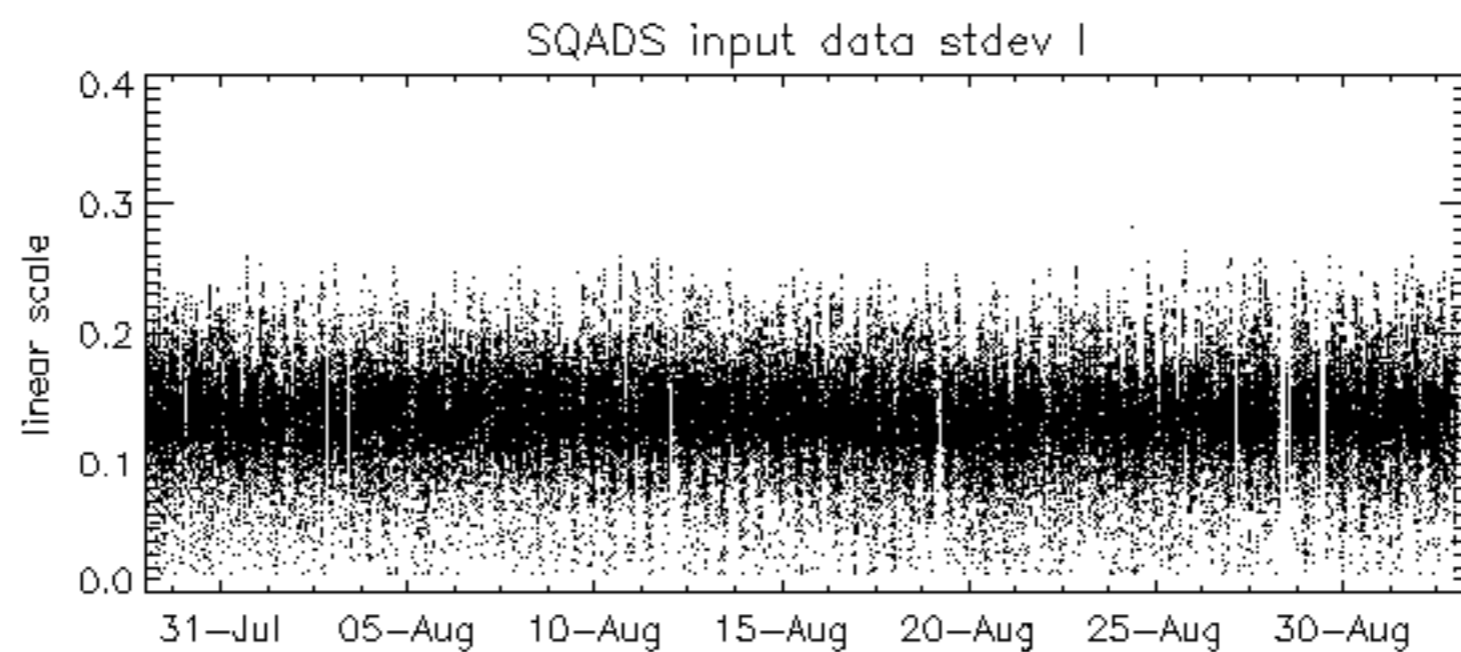
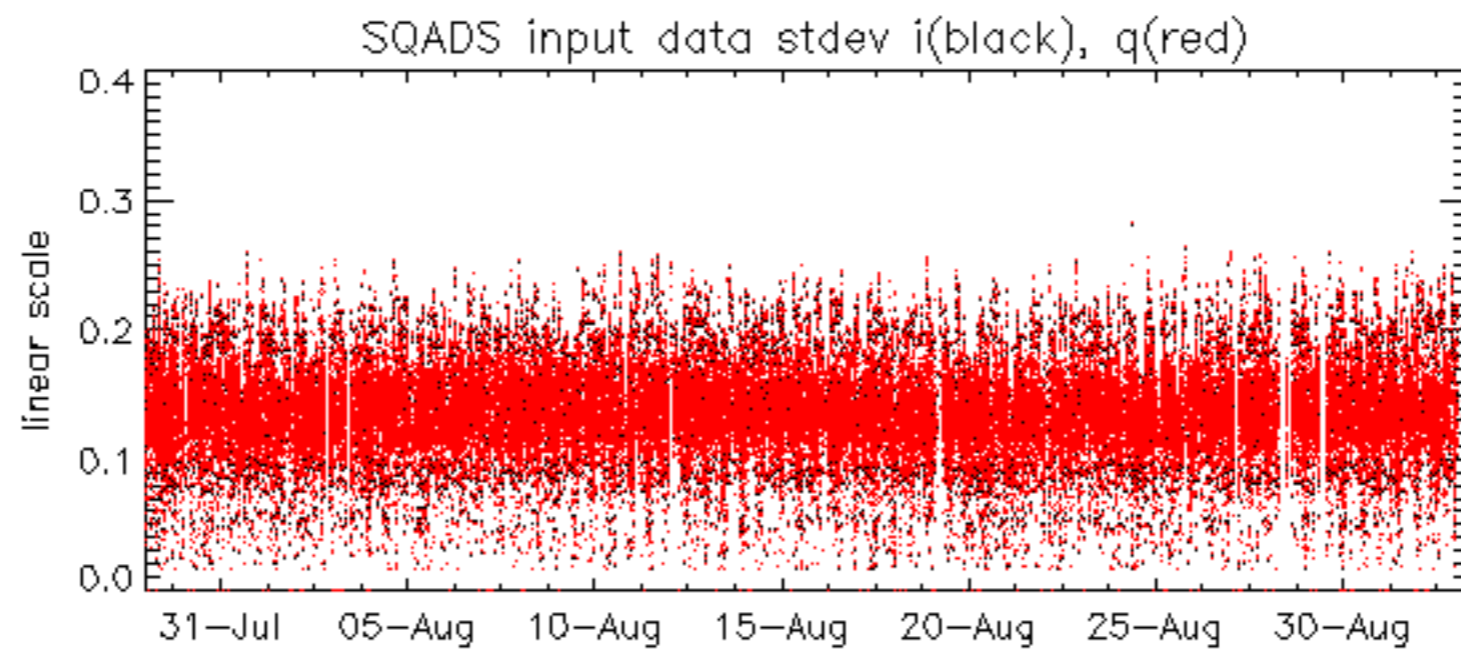


















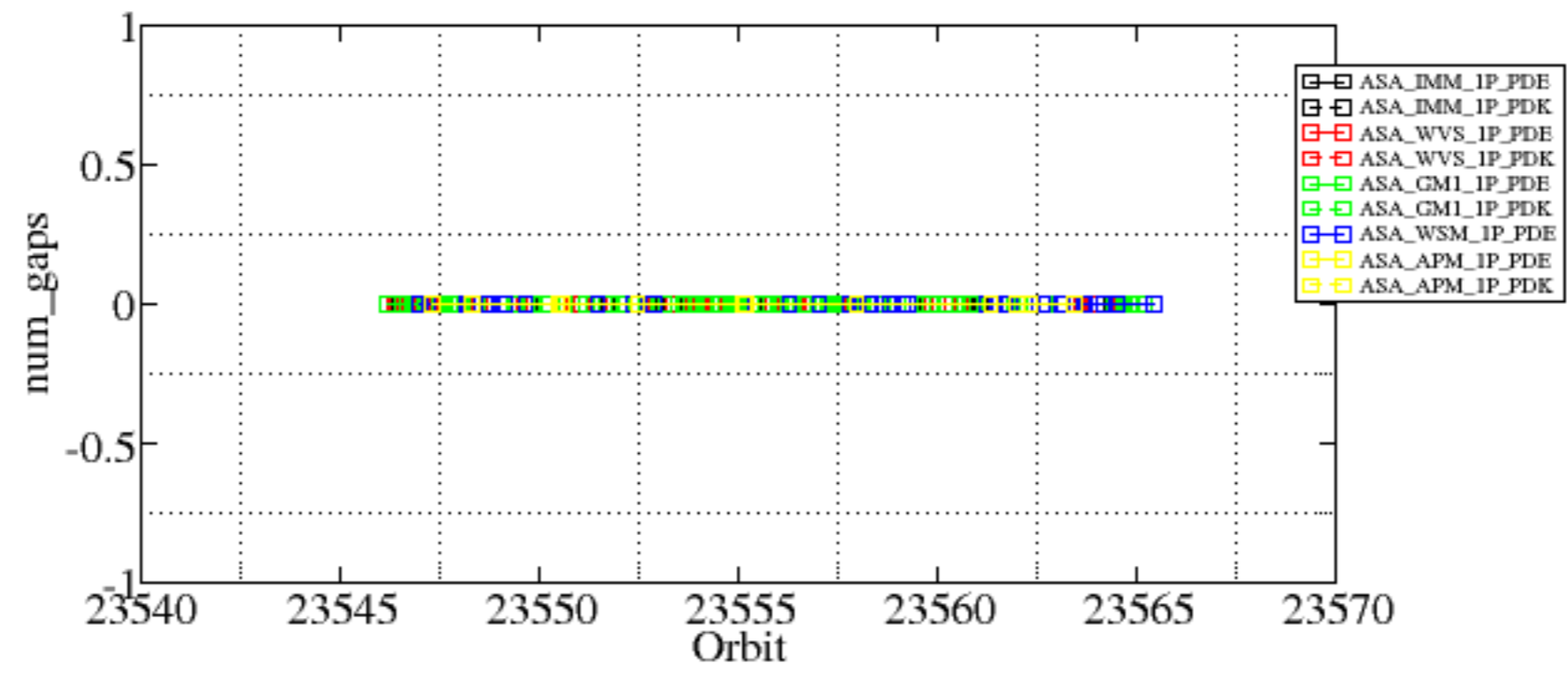


Summary of analysis for the last 3 days 2006090[112]

The assumption is taken that the SQADS num\_gaps and num\_missing\_lines fields are reliable indicators of telemetry problems

Filename	num_gaps	num_missing_lines
ASA_GM1_1PNPDK20060901_084711_000006702050_00451_23551_3941.N1	0	21
ASA_WSM_1PNPDE20060901_183643_000002072050_00457_23557_0466.N1	0	67
ASA_WSM_1PNPDE20060902_020157_000000862050_00461_23561_0501.N1	0	34





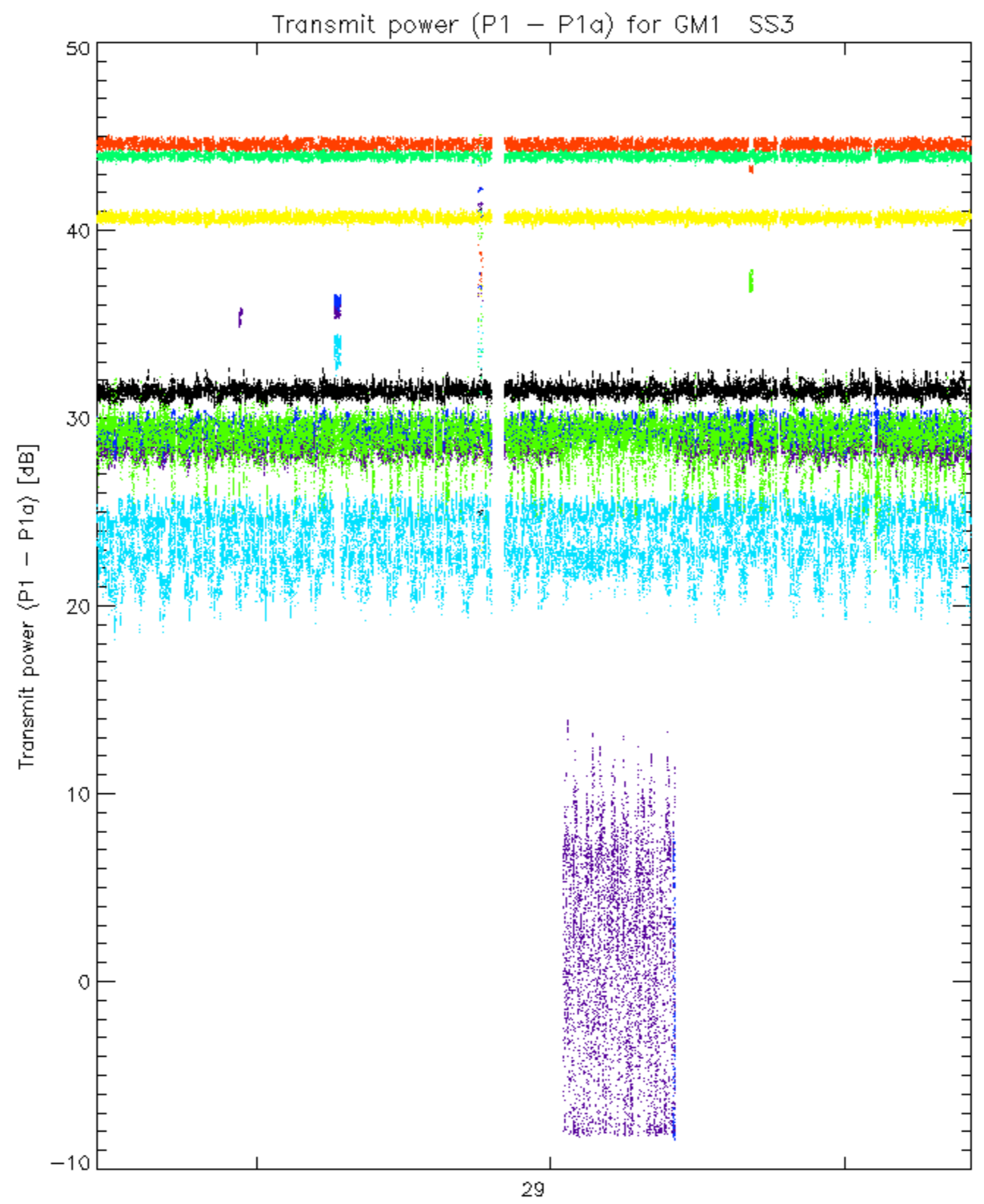




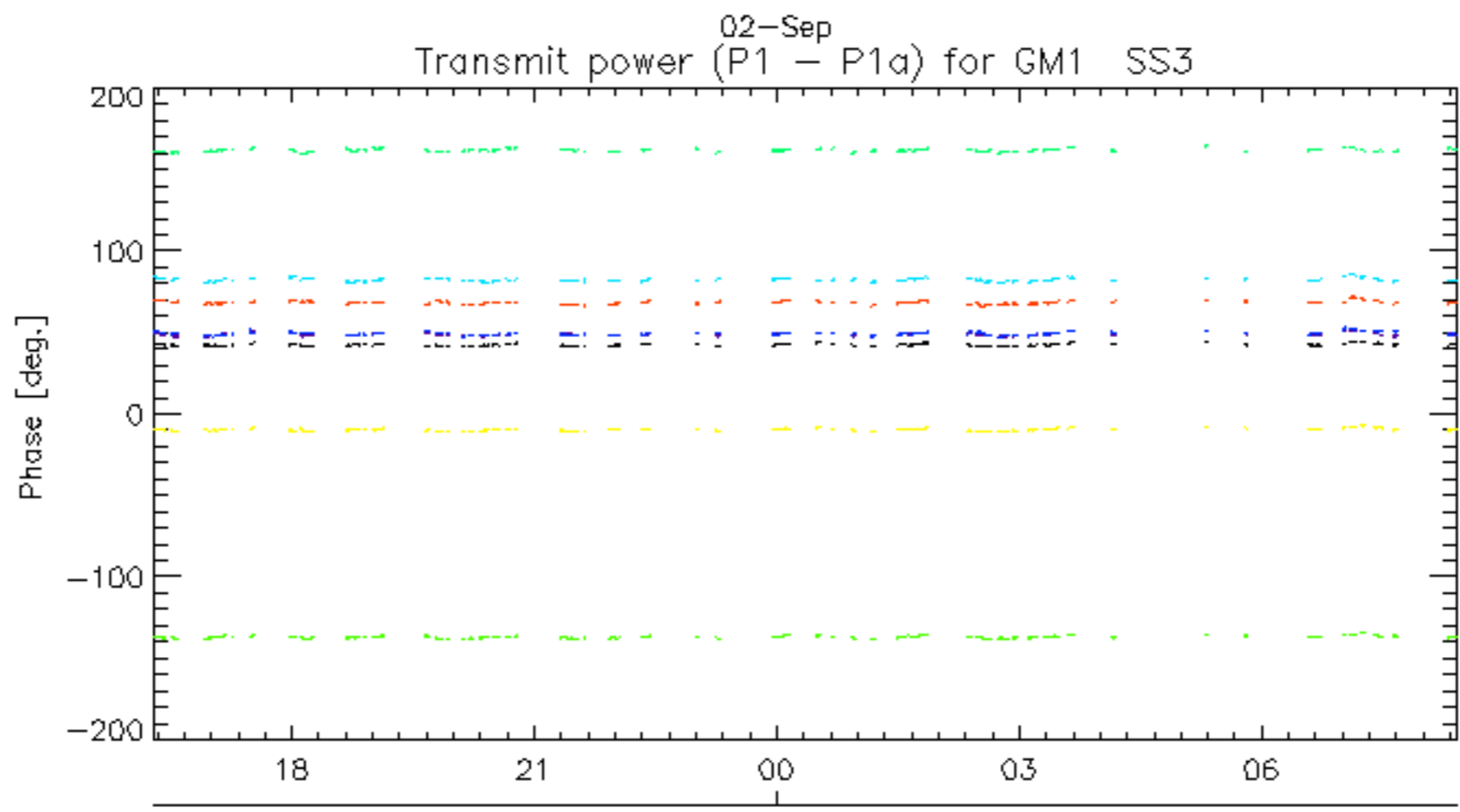
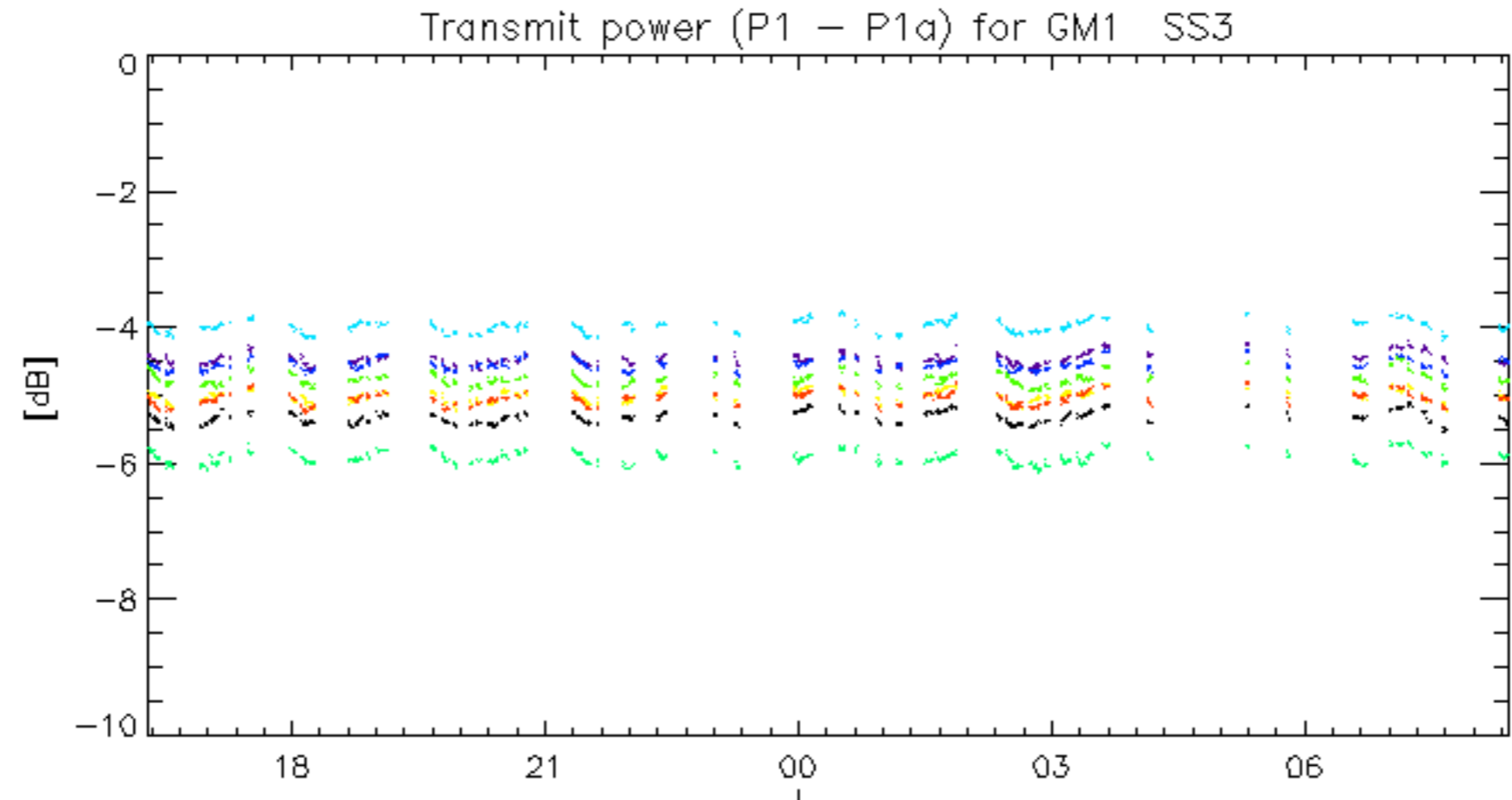






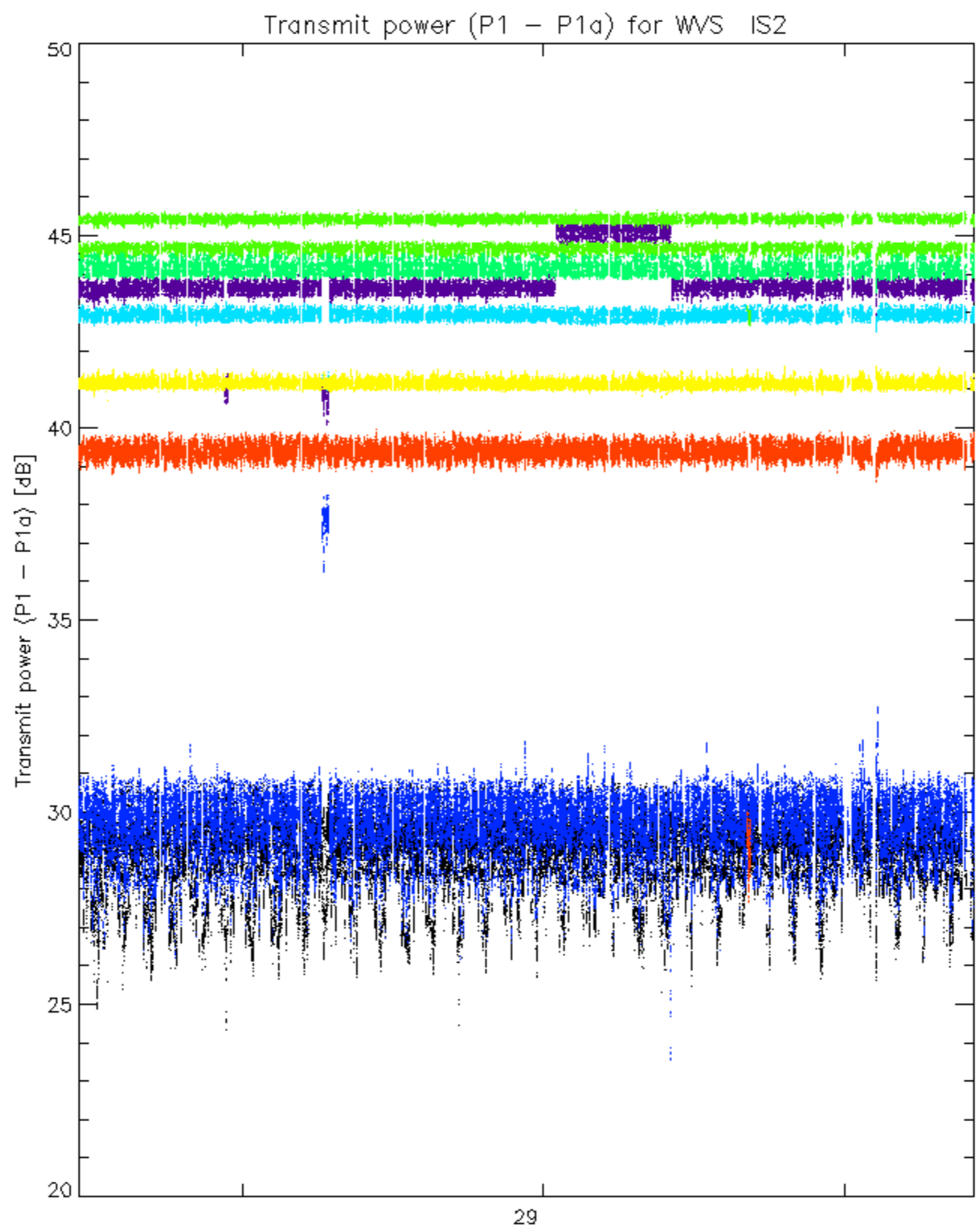


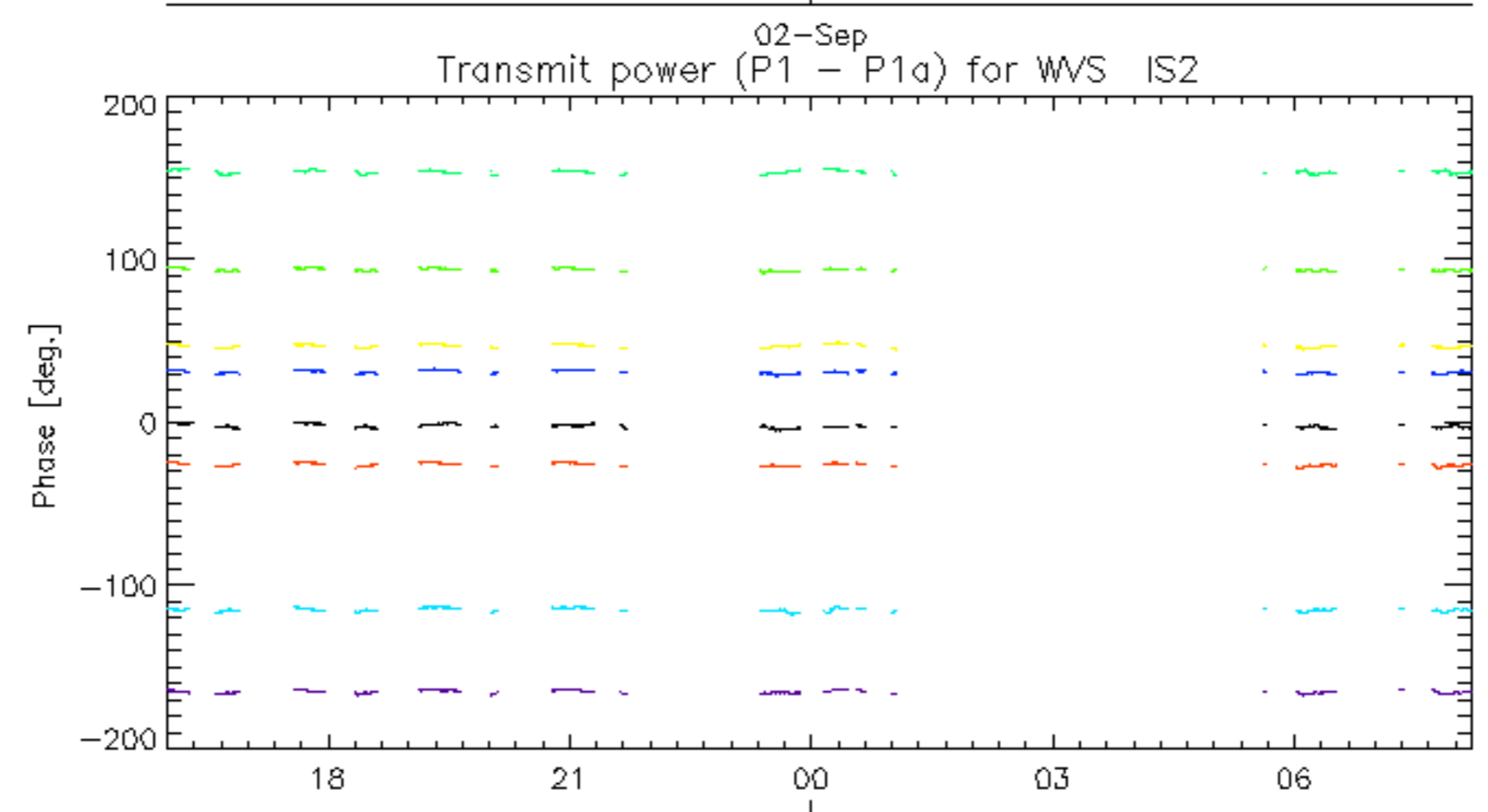
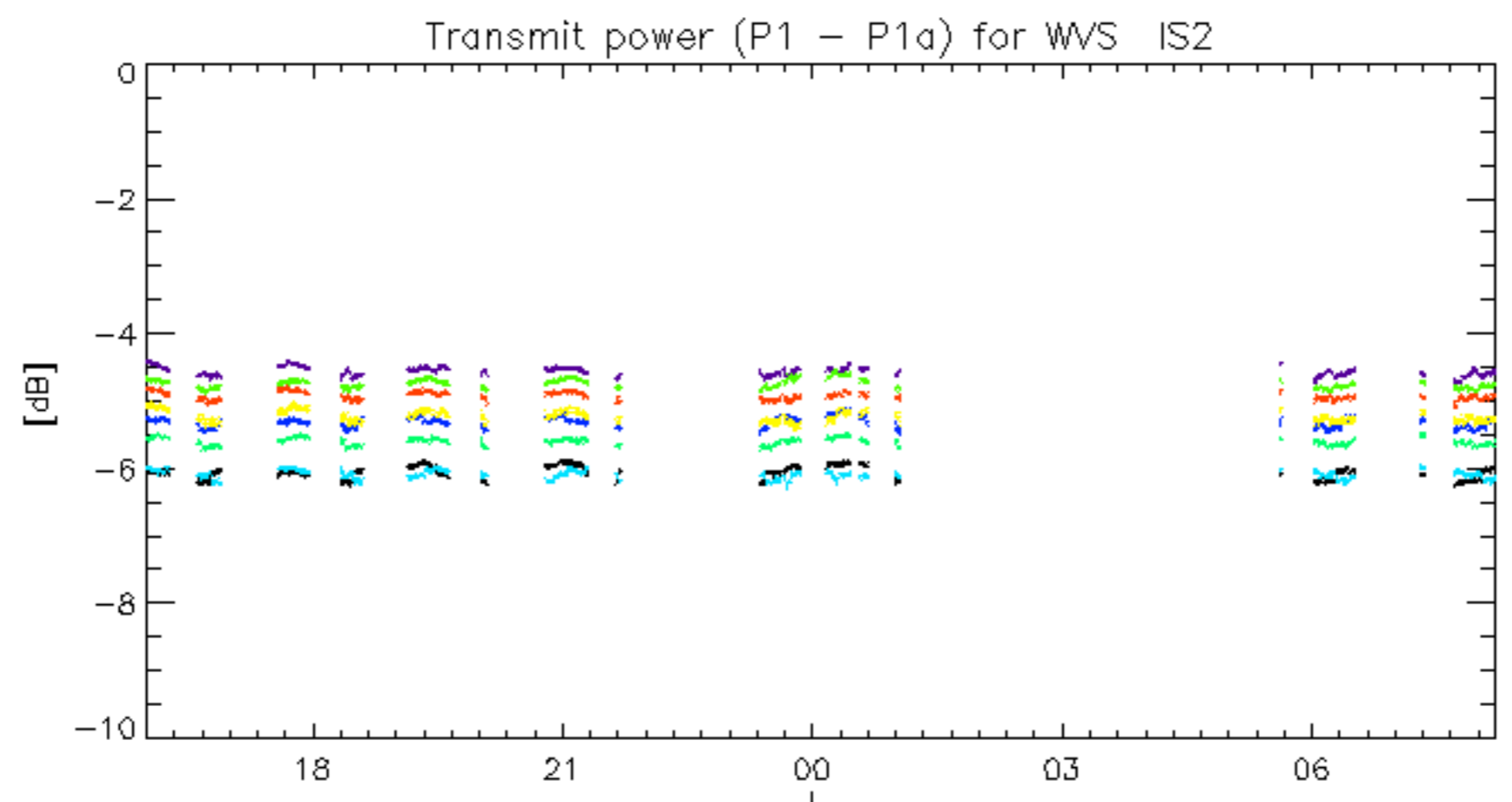
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30



02-Sep  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30







02-Sep  
rows: \_ 3 \_ 7 \_ 11 \_ 15 \_ 19 \_ 22 \_ 26 \_ 30

No unavailabilities during the reported period.